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APPEARANCES (CONTINUED)

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ALSO PRESENT: DOUGLAS BRUSH
TIMOTHY SCHMIDT
TONI BAKER
NORA PUCKETT

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1 SAN JOSE, CALIFORNIA

APRIL 21, 2022

2 P R O C E E D I N G S

3 (PROCEEDINGS CONVENED AT 10:26 A.M.)

4 THE COURT: GOOD MORNING, EVERYONE. WELCOME TO THE
5 10:00 O'CLOCK HEARING, MORE OR LESS. SO PLEASE BE SEATED.

6 THANK YOU FOR YOUR PATIENCE WHILE WE GOT THE TECHNOLOGY UP
7 AND RUNNING.

8 MS. FANTHORPE, IF YOU'LL CALL THE MATTER, WE'LL GET
9 UNDERWAY.

10 THE CLERK: CALLING CASE 20-CV-3664, BROWN, ET AL,
11 VERSUS GOOGLE, LLC, ET AL.

12 COUNSEL, PLEASE IDENTIFY YOURSELVES FOR THE RECORD,
13 BEGINNING WITH PLAINTIFF.

14 MR. MAO: GOOD MORNING, YOUR HONOR.

15 THIS IS MR. MAO.

16 I WANTED TO INTRODUCE MR. BOIES.

17 MR. BOIES: GOOD MORNING, YOUR HONOR.

18 MR. MAO: WE ALSO HAVE SOMEONE NEW TO OUR FIRM. THIS
19 IS ALISON ANDERSON FROM THE DEPARTMENT OF JUSTICE.

20 MS. ANDERSON: GOOD MORNING, YOUR HONOR.

21 MR. MAO: MR. YANCHUNIS, WHO YOU OBVIOUSLY HAD APPEAR
22 BEFORE YOU BEFORE.

23 AND MR. MCGEE FROM MORGAN & MORGAN AS WELL, AND THE FIVE
24 OF US WILL BE CONDUCTING THE HEARING.

25 THE COURT: EXCELLENT. THANK YOU. GOOD MORNING.

1 AND THANK YOU ALL FOR GETTING HERE IN PERSON. I APPRECIATE IT.

2 AND FOR THE DEFENDANTS TODAY?

3 MR. SCHAPIRO: HELLO, YOUR HONOR.

4 I'M ANDREW SCHAPIRO FROM QUINN, EMANUEL FOR GOOGLE.

5 I'M JOINED BY MY COLLEAGUE, VIOLA TREBICKA.

6 MS. TREBICKA: GOOD MORNING, YOUR HONOR.

7 MR. SCHAPIRO: AND JOSEF ANSORGE.

8 MR. ANSORGE: GOOD MORNING, YOUR HONOR.

9 MR. SCHAPIRO: WE'RE THE THREE WHO WILL BE PRESENTING
10 OR ADDRESSING THE COURT OR THE WITNESS TODAY.

11 WE ALSO HAVE OUR TRUSTED ASSOCIATE, SETH FORTENBERY, WHO
12 WILL BE RUNNING THE SHOW HERE TODAY.

13 THE COURT: EXCELLENT.

14 MR. SCHAPIRO: AND PRESENT WITH US IN THE AUDIENCE WE
15 HAVE TWO ATTORNEYS FROM GOOGLE. WE HAVE TONI BAKER, WHO IS
16 ASSOCIATE DISCOVERY COUNSEL.

17 THE COURT: GOOD MORNING.

18 MR. SCHAPIRO: AND WE HAVE NORA PUCKETT, WHO IS
19 DIRECTOR OF LITIGATION.

20 THE COURT: GOOD MORNING. THANK YOU FOR BEING HERE.

21 ALL RIGHT. WE ALSO HAVE THE SPECIAL MASTER,
22 DOUGLAS BRUSH, AND MR. SCHMIDT, WHO'S A MEMBER OF HIS TEAM.
23 THEY'VE BEEN VERY INVOLVED IN THE PROCEEDINGS IN THIS MATTER
24 AND ARE JOINING US IN PERSON TODAY.

25 THANK YOU FOR MAKING THAT EFFORT.

1 IT IS GOOD TO SEE EVERYONE. IT'S GOOD TO HAVE EVERYBODY
2 IN PERSON IN COURT, SO THANK YOU ALL FOR THAT EFFORT.

3 WE ARE WEARING MASKS TODAY. WE WILL PROCEED WITH CAUTION.

4 AND WHEN WE HAVE A WITNESS ON THE STAND -- OH, THEY
5 ADJUSTED MY MONITOR. THAT'S NOT GOING TO WORK, IS IT?

6 BUT WHEN WE HAVE A WITNESS ON THE STAND, I MAY ASK THE
7 WITNESS AND THE SPEAKER TO TAKE OFF THEIR MASKS SO THAT THE
8 COURT REPORTER CAN HEAR AND BE SURE THAT OUR RECORD IS
9 COMPLETE.

10 ALL RIGHT. WE ARE ON TODAY FOR A PROCEEDING THAT FOLLOWS
11 PLAINTIFFS' MOTION FOR DISCOVERY SANCTIONS, AND I HAVE HAD SOME
12 CONVERSATIONS WITH COUNSEL AS TO HOW WE WILL PROCEED.

13 AND WHAT WE WILL DO IS I WILL FIRST HEAR A SHORT, BRIEF
14 OPENING POSITION STATEMENT FROM EACH SIDE; AND THEN WE WILL
15 PROCEED FIRST IN HEARING MODE ON THE MOTION WITH A --
16 PLAINTIFFS WILL MOVE THROUGH AND MAKE THEIR POINTS AND THEN,
17 WHEN APPROPRIATE, CALL A WITNESS. I UNDERSTAND THERE'S ONE
18 WITNESS ON THE PLAINTIFFS' SIDE.

19 AND I HAVE RECEIVED LOTS AND LOTS OF EXHIBITS FROM ALL THE
20 PARTIES, SO TO THE EXTENT THAT THERE ARE ADDITIONAL DOCUMENTS
21 THAT ARE NOT ALREADY IN THE RECORD BEFORE THE COURT THAT A
22 PARTY WANTS TO MOVE INTO EVIDENCE IN THESE PROCEEDINGS, WE'LL
23 HANDLE THAT.

24 ALL RIGHT. SO WITHOUT FURTHER DELAY OR ADO, MR. BOIES,
25 LET'S START WITH PLAINTIFF.

1 MR. BOIES: THANK YOU, YOUR HONOR.

2 MAY IT PLEASE THE COURT.

3 WHAT I'LL TRY TO DO IS BRIEFLY SUMMARIZE SEVEN KEY POINTS
4 THAT I THINK MAY BE HELPFUL TO THE COURT IN FRAMING THE
5 PRESENTATION THAT WE'RE GOING TO GIVE TODAY.

6 FIRST -- AND I DON'T THINK THIS SHOULD BE IN DISPUTE --
7 DATA AND DOCUMENTS CONCERNING INCOGNITO USE AND USERS ARE
8 RELEVANT. THEY'RE RELEVANT TO DAMAGES, FOR EXAMPLE, THE EXTENT
9 OF THE USE; THEY'RE RELEVANT TO LIABILITY, THE TYPE AND NATURE
10 OF USE; AND ACCORDING TO GOOGLE, THEY'RE RELEVANT TO CLASS
11 CERTIFICATION.

12 THE COURT IS WELL AWARE, I THINK, OF PLAINTIFFS' REPEATED,
13 AND I MIGHT SAY URGENT, EFFORTS TO OBTAIN DOCUMENTS AND DATA
14 CONCERNING INCOGNITO USE AND USERS.

15 SECOND, I DON'T KNOW IF WE -- IF THESE ARE BEING DISPLAYED
16 OR NOT, THEY'RE NOT COMING UP ON THE MONITOR HERE.

17 THE CLERK: YOU WOULD NEED TO TELL ME. WHAT DID YOU
18 WANT DISPLAYED? PLAINTIFFS'?

19 MR. BOIES: MAY I HAVE JUST A MOMENT, YOUR HONOR?

20 THE COURT: YES.

21 THE CLERK: IS IT PLAINTIFFS' SIDE?

22 MR. MAO: YES, PLAINTIFFS' SIDE.

23 THE CLERK: I JUST HAVE TO DO A LITTLE TOGGLE, SO I
24 JUST NEED TO KNOW.

25 MR. BOIES: THANK YOU.

1 SECOND, IN ORDER TO TRACK AND ANALYZE INCOGNITO BROWSING,
2 GOOGLE DEVELOPED INCOGNITO DETECTION SIGNALS. THESE SIGNALS
3 WERE ONE BIT FIELDS THAT WERE TURNED ON AND OFF BASED ON
4 WHETHER THE INCOGNITO MODE WAS BEING USED.

5 THESE SIGNALS INCLUDE IS_CHROME_INCOGNITO,
6 MAYBE_CHROME_INCOGNITO, AND IS_CHROME_NON_INCOGNITO.

7 GOOGLE STILL -- AND I WANT TO EMPHASIZE THIS, YOUR
8 HONOR -- STILL HAS NOT DISCLOSED WHETHER THERE ARE OTHER FIELDS
9 THAT ARE USED TO LOG INCOGNITO USE.

10 THIRD, INCOGNITO DETECTION BITS DIRECTLY CONCERN
11 INCOGNITO'S USE AND USERS.

12 FIRST, WITH RESPECT TO THAT, GOOGLE ITSELF DESCRIBES THE
13 IS_CHROME_INCOGNITO SIGNAL AS REPRESENTING IF AN ENTRY COMES
14 FROM A CHROME WEB BROWSER IN INCOGNITO MODE.

15 GOOGLE ITSELF DESCRIBES THE MAYBE_CHROME_INCOGNITO SIGNAL
16 AS ACCURATELY TRACKING INCOGNITO USAGE.

17 AND LATER TODAY, WE'LL REFER TO SOME DOCUMENTS, INTERNAL
18 GOOGLE DOCUMENTS THAT TRACK AND ANALYZE AND DECIDE THAT THE
19 INCOGNITO TRACKING IS ACCURATE.

20 NOW, THESE SIGNALS AND GOOGLE'S USE OF THEM ARE RELEVANT
21 TO THE USE AND USERS OF INCOGNITO.

22 HOW ACCURATE THEY ARE AND EXACTLY HOW THEY ARE USED AT
23 GOOGLE MAY BE SUBJECT TO DISPUTE. WE MAY BE DEBATING THAT
24 TODAY.

25 BUT REGARDLESS OF HOW ACCURATE OR INACCURATE GOOGLE CLAIMS

1 THEY ARE, WE RESPECTFULLY SUBMIT THAT PLAINTIFFS WERE ENTITLED
2 TO KNOW ABOUT THEM, ANALYZE THEM FOR THEMSELVES, HAVE THEIR OWN
3 EXPERTS ANALYZE THEM, AND HAVE THE COURT DECIDE WHETHER THEY
4 WERE RELIABLE OR IRRELEVANT OR NOT.

5 NOW, FOURTH, GOOGLE DID NOT GIVE US DOCUMENTS RELATED TO
6 THESE INCOGNITO IDENTIFICATION BITS.

7 EXHIBIT 15 IS A LETTER DATED APRIL 1ST, 2022. IT'S
8 EXHIBIT 15.

9 AND --

10 THE COURT: AND, MR. BOIES, JUST TO BE CLEAR, THAT
11 EXHIBIT 15, IS THAT TO THE MAO DECLARATION?

12 MR. BOIES: I'M SORRY, YOUR HONOR. THE EXHIBIT
13 NUMBERS I WILL BE USING WILL BE THE EXHIBIT NUMBERS FOR THIS
14 PRESENTATION.

15 THE COURT: OKAY.

16 MR. BOIES: SO THIS WILL BE HEARING EXHIBIT 15.

17 THE COURT: OKAY. THANK YOU.

18 MR. BOIES: AND WE RECEIVED THIS LETTER APRIL 1ST
19 AFTER THE CLOSE OF DISCOVERY, AND FOR THE FIRST TIME, GOOGLE
20 SAYS IT'S PROVIDING THE PROTO COMMENT FOR THE
21 IS_CHROME_INCOGNITO FIELD.

22 IT SAYS IT REPRESENTS IF AN ENTRY COMES FROM A CHROME WEB
23 BROWSER IN THE INCOGNITO MODE.

24 NOW, THIS IS THE FIRST TIME THAT THIS WAS PRESENTED TO US.

25 WE DID NOT GET A SINGLE DOCUMENT, NOT A SINGLE DOCUMENT IN

1 DISCOVERY THAT EVEN MENTIONED THE IS_CHROME_INCOGNITO FIELD.

2 NOW, THIS OBVIOUSLY HAD TO COME FROM SOMEWHERE. WE STILL
3 HAVEN'T ACTUALLY GOTTEN THOSE DOCUMENTS.

4 NOW, FIFTH, GOOGLE DID NOT DISCLOSE THE IDENTITIES OF
5 EMPLOYEES KNOWLEDGEABLE CONCERNING ITS INCOGNITO SIGNALS.

6 THE COURT WILL REMEMBER THAT WE SERVED REQUESTS FOR
7 PRODUCTION. ON FEBRUARY 4TH, 2021, GOOGLE RESPONDED TO OUR
8 RFP'S 11 AND 12 BY GIVING US A LIST OF 226 PEOPLE WHO HAD
9 RELEVANT KNOWLEDGE.

10 THAT LIST DID NOT INCLUDE ANY OF THE PEOPLE RESPONSIBLE
11 FOR GOOGLE'S INCOGNITO DETECTION BITS. THEY ADMITTED
12 MESSRS. LIAO, LEUNG, FIARD, AND MS. LIU, ALL OF WHOM YOU'RE
13 GOING TO HEAR ABOUT TODAY.

14 NOW, THEN WE SERVED INTERROGATORIES, AND ON
15 MARCH 29, 2021, THEY RESPONDED TO OUR INTERROGATORY NUMBER 4,
16 WHICH ASKED FOR THEM TO IDENTIFY THE PEOPLE WHO KNEW ABOUT
17 PRIVATE BOT BROWSING AND KNEW ABOUT INCOGNITO.

18 GOOGLE RESPONDED BY REFERENCING ITS EARLIER LIST OF 226
19 EMPLOYEES AND ADDING EIGHT MORE, BUT, AGAIN, NOT LISTING ANY OF
20 THE PEOPLE RESPONSIBLE FOR GOOGLE'S INCOGNITO DETECTION BITS,
21 INCLUDING THE SAME FIVE PEOPLE.

22 NOW, SIXTH, THE COURT ORDERED GOOGLE TO PROVIDE A
23 DECLARATION -- THE COURT ORDERED THAT ON NOVEMBER 12TH, 2021 --
24 THAT PROVIDED A COMPLETE LIST OF THE DATA SOURCES THAT WERE
25 RELEVANT, THAT CONTAINED INFORMATION RELEVANT TO PLAINTIFFS'

1 CLAIMS IN THE COURT'S WORDS.

2 GOOGLE'S DECLARATION FAILED TO DISCLOSE TWO LOGS THAT
3 LOGGED GOOGLE'S IS_CHROME_INCOGNITO SIGNAL. THEY HAD THEM IN
4 THEIR POSSESSION. THEY DIDN'T DISCLOSE THEM.

5 THEY DIDN'T DISCLOSE THREE LOGS THAT LOGGED GOOGLE'S
6 IS_CHROME_NON_INCOGNITO SIGNAL. AGAIN, THEY HAD THOSE LOGS.
7 THEY DIDN'T DISCLOSE THEM.

8 THEY ALSO FAILED TO DISCLOSE 17 LOGS THAT LOGGED GOOGLE'S
9 MAYBE_CHROME_INCOGNITO SIGNAL.

10 SEVENTH. ON DECEMBER 3, 2021, MR. CHRIS LIAO TESTIFIED,
11 AND WE BELIEVE TESTIFIED INACCURATELY, DESCRIBING THE
12 MAYBE_CHROME_INCOGNITO SIGNAL AS A "HYPOTHETICAL SIGNAL" THAT
13 HAD BEEN ABANDONED.

14 WE RESPECTFULLY SUGGEST TO THE COURT THAT THE
15 MAYBE_CHROME_INCOGNITO SIGNAL WAS NOT HYPOTHETICAL. IT WAS
16 OPERATIONAL AND WAS BEING LOGGED IN AT LEAST [REDACTED] LOGS.

17 SECOND, THE MAYBE_CHROME_INCOGNITO SIGNAL WAS ALSO NOT
18 ABANDONED. IT WAS BEING USED AT THE VERY TIME MR. LIAO
19 TESTIFIED. INDEED, WE WILL SEE LATER THIS MORNING RECENTLY
20 DISCLOSED DOCUMENTS THAT SHOW THAT MR. LIAO'S DIRECT REPORTS
21 WERE TRACKING, ANALYZING, AND EVALUATING THIS PARTICULAR
22 INCOGNITO DETECTION BIT AND CONCLUDING THAT THE BIT ACCURATELY
23 REFLECTED THE AMOUNT OF USAGE OF INCOGNITO.

24 AGAIN, WHETHER OR NOT GOOGLE CLAIMS THE SIGNAL'S RELIABLE
25 IS IRRELEVANT TO THIS MOTION. RELIABLE OR NOT, THIS IS

1 SOMETHING THAT THE PLAINTIFFS DEMANDED, THE COURT ORDERED US TO
2 RECEIVE, AND WE DIDN'T GET IT.

3 THANK YOU, YOUR HONOR.

4 THE COURT: THANK YOU, MR. BOIES.

5 MS. TREBICKA.

6 MS. TREBICKA: GOOD MORNING, YOUR HONOR.

7 I WILL TAKE MY MASK OFF AS INSTRUCTED BY THE COURT
8 REPORTER. THANK YOU.

9 MS. FANTHORPE, MAY WE PLEASE PUT OUR SLIDES UP?

10 THE CLERK: YES.

11 MS. TREBICKA: GOOD MORNING, YOUR HONOR. MAY IT
12 PLEASE THE COURT. THANK YOU FOR THIS OPPORTUNITY.

13 WHAT I'D LIKE TO PROVIDE THE COURT IN THIS OPENING IS A
14 MENTAL MAP OF WHAT'S IMPORTANT FOR PURPOSES OF THIS SANCTIONS
15 MOTION.

16 YOU HEARD FOR -- OR YOU HEARD SEVEN POINT FROM MR. BOIES.

17 I'D LIKE TO POINT YOUR ATTENTION TO FOUR PRINCIPLE
18 QUESTIONS THAT ARE VERY IMPORTANT AND THAT WE WILL GO THROUGH
19 DURING THIS HEARING.

20 THE FIRST IS, WAS THERE CONCEALMENT?

21 THE SECOND IS, WAS THERE PREJUDICE?

22 THE THIRD IS, IS THE X-CLIENT DATA HEADER ACTUALLY A
23 RELIABLE DETECTION TOOL FOR CHROME INCOGNITO BROWSING?

24 AND LASTLY, SHOULD THERE BE SANCTIONS?

25 AND WE BELIEVE THE ANSWER TO ALL OF THOSE FOUR QUESTIONS

1 IS NO.

2 BY FAR THE MOST IMPORTANT QUESTION IS THE CONCEALMENT
3 QUESTION, WAS THERE CONCEALMENT?

4 WE WILL SHOW THAT GOOGLE AFFIRMATIVELY DISCLOSED THESE
5 BITS DURING DISCOVERY, AND WE DISCLOSED THEM LAST YEAR.

6 THE -- OVER THE COURSE OF THE BRIEFING, THE FOCUS OF THE
7 PLAINTIFFS' ALLEGATIONS HAS CHANGED A LITTLE BIT, BUT IT DOES
8 STILL FOCUS ON THE MAYBE_CHROME_INCOGNITO BIT AND THE FACT
9 THAT, AS THEY ALLEGE, WE HID IT.

10 WE INCLUDED A TABLE IN OUR OPENING BRIEF THAT HIGHLIGHTED
11 WHY THAT IS UNTRUE, WORD FOR WORD. WE'VE ACTUALLY COLOR CODED
12 IT HERE FOR YOU TODAY SO THAT YOU CAN MATCH WHAT THEY CLAIM WE
13 HID WITH WHEN WE DISCLOSED IT, WHICH WAS IN SEPTEMBER OF 2021.

14 BUT THOSE DOCUMENTS WERE NOT ISOLATED INSTANCES. WE WILL
15 GO THROUGH, IN OUR ARGUMENT AND OUR CASE-IN-CHIEF, THE ACTUAL
16 DOCUMENTS THAT WERE NOT NEEDLES IN THE HAYSTACK. THEY WERE
17 ACTUALLY DOCUMENTS THAT WERE PRODUCED OVER AND OVER AND THAT
18 PLAINTIFFS FOUND AND REVIEWED.

19 AND HOW DO WE KNOW THAT? WELL, THEY CITED THEM IN
20 BRIEFING. THEY CITED THEM TO YOUR HONOR AT THE NOVEMBER 4TH
21 HEARING THAT WE HAD HERE RELATED TO THE SPECIAL MASTER
22 OBJECTIONS.

23 NOW, CURIOUSLY, DESPITE HAVING ALL OF THIS INFORMATION,
24 AND DESPITE ADMITTEDLY REVIEWING IT, PLAINTIFFS WAITED UNTIL
25 THE LAST WEEKS OF DISCOVERY TO ASK WITNESSES IN DEPOSITIONS

1 QUESTIONS ABOUT THEM, TO ASK DISCOVERY QUESTIONS ABOUT THEM AND
2 FOLLOW UP IN DISCOVERY, AND TO INCORPORATE IT IN THE SPECIAL
3 MASTER PROCESS. THAT WAS A DETAILED, EXHAUSTIVE PROCESS, THE
4 PURPOSE OF WHICH WAS TO GET AT THESE TECHNICAL QUESTIONS AND
5 THE TECHNICAL EXPLANATIONS BEHIND THEM.

6 NOW, GOOGLE -- YOU HEARD, IN OPENING, THAT GOOGLE DID NOT
7 DISCLOSE THE RIGHT WITNESSES.

8 GOOGLE DID DISCLOSE THE RIGHT WITNESSES, YOUR HONOR. AND
9 I'D LIKE TO REMIND US WHAT THE RIGHT WITNESSES MEANS. IT MEANS
10 THE RELEVANT WITNESSES, AND THE RELEVANCE HERE IS TIED TO, OR
11 TETHERED TO THE CLASS DEFINITION THAT WAS THE OPERATIVE CLASS
12 DEFINITION UP UNTIL LAST MONTH, AND THAT CLASS DEFINITION WAS,
13 AGAIN, TETHERED TO THE GOOGLE ANALYTICS AND GOOGLE AD MANAGER
14 SERVICES WITHIN GOOGLE.

15 SO WHAT GOOGLE DID IN RESPONDING TO INTERROGATORY
16 RESPONSES OR IDENTIFYING PEOPLE TO PUT ON, TO PUT IN THE
17 EMPLOYEE LIST THAT WE PRODUCED TO PLAINTIFFS, WAS TO GO BACK TO
18 THOSE SERVICES AND IDENTIFY THE FOLKS WITH RELEVANT, UNIQUE,
19 NON-DUPPLICATIVE KNOWLEDGE WITHIN CHROME, GOOGLE AD MANAGER, AND
20 GOOGLE ANALYTICS, AND THAT IS HOW WE ARRIVED AT THOSE LISTS.
21 THAT IS THE PROCESS WE FOLLOWED.

22 LEUNG AND LIU -- MR. BERT LEUNG AND MS. MANDY LIU AND
23 MR. QUENTIN FIARD WERE NOT OF GOOGLE AD MANAGER, GOOGLE
24 ANALYTICS, OR GOOGLE CHROME.

25 I MENTIONED THAT THE CLASS DEFINITION WAS THE ONE THAT

1 I'VE DISPLAYED ON THE SCREEN UNTIL LAST MONTH. THAT'S BECAUSE
2 LAST MONTH PLAINTIFFS FILED A MOTION TO AMEND THEIR COMPLAINT
3 AND JUDGE GONZALEZ ROGERS GRANTED IT.

4 NOW, THE MOTION -- NOW, THE CLASS CERTIFICATION IS
5 SOMEWHAT BROADER. IT INCLUDES USERS WHO WENT TO THIRD PARTY
6 WEBSITES THAT HAD ANY GOOGLE ADVERTISING OR TRACKING CODE.

7 HOWEVER, THAT MOTION WAS GRANTED WITH THE EXPRESS
8 LIMITATION THAT DISCOVERY WOULD NOT CHANGE, THE SCOPE OF
9 DISCOVERY WOULD NOT CHANGE, AND PLAINTIFFS AGREED TO IT, WITH
10 THE UNDERSTANDING THAT THE DISCOVERY, UP TO THAT POINT, UP TO
11 LAST MONTH -- THIS IS BEFORE THEY FILED THE MOTION FOR
12 SANCTIONS -- WAS PROPER AND APPROPRIATE AND SUFFICIENT.

13 AND HERE WE ARE TODAY.

14 PLAINTIFFS MAKE A LOT OF MR. LEUNG AND MS. LIU AND
15 MR. FIARD.

16 I'D LIKE TO NOTE, TO JUST REST ON MR. LIAO FOR LITTLE BIT.
17 HE WAS ADDED AS A CUSTODIAN IN JUNE 2021. THE REASON HE WAS
18 ADDED AS A CUSTODIAN WAS NOT BECAUSE OF THE
19 MAYBE_CHROME_INCOGNITO BIT, WHICH WAS A MINOR PART OF HIS WORK
20 AS YOU WILL HEAR TODAY.

21 IT WAS RATHER BECAUSE HE WAS THE TEAM LEAD OF THE ADS
22 IDENTITY AND INFRASTRUCTURE TEAM, WHICH PROVIDES, SECURES, AND
23 MANAGES THE USE OF IDENTITY IN ADS SURVEY.

24 SO IT'S THE PLACE -- AND HE WAS THE MASTERMIND OF THIS.

25 IT'S THE PLACE WHERE GOOGLE INTERNALLY DECIDES, OKAY, IS

1 THE AD SERVING GOING TO BE ON A BISCOTTI BASIS OR A GAIA BASIS?
2 AND THAT IS THE WHOLE INFRASTRUCTURE IS THAT THAT THE
3 AUTHENTICATED AND UNAUTHENTICATED DATA CAN BE KEPT APART, CAN
4 BE KEPT SEPARATE. AND THAT IS A PRIVACY REASON THAT IS FOUNDED
5 ON PRIVACY PRINCIPLES.

6 WE OFFERED CHRIS LIAO FOR A DEPOSITION ON AUGUST 31ST,
7 2021. PLAINTIFFS DID NOT TAKE THAT DATE. MR. LIAO WAS NOT
8 DEPOSED UNTIL DECEMBER 3RD, 2021.

9 AS I SAID, WE DID NOT ADD BERT LEUNG OR MANDY LIU OR
10 QUENTIN FIARD TO THE CUSTODIAN LIST, AT LEAST FOR BERT LEUNG
11 AND MANDY LIU, UNTIL WE REALIZED THE IMPORTANCE AND YOUR HONOR
12 ASKED US TO ADD THEM, IN WHICH CASE WE DID ADD THEM AND PRODUCE
13 THE DOCUMENTS. WE DID SO ON AN ACCELERATED BASIS, WHICH LED TO
14 CERTAIN PRIVILEGED DOCUMENTS ALSO BEING INADVERTENTLY
15 DISCLOSED. THIS WAS ALL IN AN EFFORT TO CURE WHATEVER
16 PREJUDICE PLAINTIFFS MAY CLAIM THERE IS.

17 HOWEVER, EVEN BEFORE THEY WERE ADDED TO THE CUSTODIAN
18 LIST, THERE WERE MORE -- OR CLOSE TO 10,000 DOCUMENTS WITH
19 THOSE PEOPLE'S NAMES ON IT. SOME OF THEM WERE DOCUMENTS THAT
20 PLAINTIFFS REVIEWED AND CITED TO YOUR HONOR.

21 NEXT, GOOGLE DID NOT MISLEAD OR CONCEAL, YOUR HONOR, AND
22 THAT IS THE THREE ISSUES THAT YOU WILL HEAR A LOT MORE ABOUT,
23 INCLUDING FROM WITNESSES.

24 TAKING THEM FROM THE BOTTOM, MR. LIAO DID NOT MISLEAD
25 PLAINTIFFS. WE WILL SHOW YOU THE QUESTIONS THAT WERE ASKED OF

1 HIM. WE WILL SHOW YOU HIS ANSWERS. HAD HE ANSWERED ANY
2 DIFFERENTLY, HE WOULD HAVE PERJURED HIMSELF.

3 AGAIN FROM THE BOTTOM, MR. GOLUEKE DID NOT CONCEAL
4 ANYTHING. HE IS GOING TO TESTIFY TO THE THOROUGH PROCESS THAT
5 HE WENT THROUGH TO UNDER -- TO ARRIVE AT THE RELEVANT LOG THAT
6 IS WE PROPOSED TO BE SEARCHED IN THE SPECIAL MASTER PROCESS.
7 AGAIN, IT WAS TIED TO THE CLASS DEFINITION. THE STARTING POINT
8 WAS LOGS FROM THE SERVICES THAT MATTERED THAT WERE RELEVANT,
9 GOOGLE AD MANAGER AND GOOGLE ANALYTICS.

10 AND FINALLY, WE DID NOT ALTER EVIDENCE. IT'S PURE
11 FABRICATION TO SAY SO. SPECIAL MASTER BRUSH, WHO IS SITTING
12 HERE TODAY WITH US, WE DESCRIBED TO HIM THE TECHNICAL BURDENS
13 OF PROVIDING THE ENTIRE SCHEMA FROM LOGS, FROM SPECIFIC LOGS,
14 NOT ALL LOGS, ONLY THE [REDACTED] LOGS, AND WE ASKED THAT WE USE
15 THIS READY-MADE TOOL TO IDENTIFY THE HUNDRED LARGEST FIELDS
16 FROM THOSE LOGS.

17 IN UNDERSTANDING THE TECHNICAL BURDENS THAT CAME WITH
18 PROVIDING THE ENTIRETY OF THE SCHEMA AND THE UNRELIABILITY IN
19 PROVIDING THE ENTIRE SCHEMA FOR [REDACTED] LOGS, MR. BRUSH ALLOWED
20 US TO DO THAT.

21 AND BY THE WAY, YOUR HONOR, THIS IS A LITTLE TECHNICAL,
22 AND WE'LL GO THROUGH THIS IN ARGUMENT A LITTLE MORE, BUT THE
23 PREJUDICE IS VERY LITTLE, BECAUSE AFTER PRODUCING THE SCHEMA,
24 WE THEN ALSO PRODUCED THE LOGS WITH DATA WRITTEN IN THE LOGS
25 WHICH ALSO PRODUCED THE FIELDS AGAIN. THEREFORE, ANY CLAIM OF

1 PREJUDICE IS REALLY PURE FABRICATION.

2 NOW WE ARE AT THE PREJUDICE POINT, WHICH I'VE PREVIEWED A
3 LITTLE BIT.

4 THIS IS ANOTHER EXTREMELY IMPORTANT POINT, AND I WILL GO
5 THROUGH IT QUICKLY BECAUSE I PUT A TIMER FOR MYSELF AND I KNOW
6 THAT I AM SPEAKING QUITE A BIT AND I DO WANT US TO GET TO THE
7 CASE-IN-CHIEF.

8 BUT I'D LIKE TO -- AS I SAID, I'D LIKE TO LAY THIS MENTAL
9 MAP FOR YOUR HONOR TO KNOW WHAT'S COMING, WHAT'S COMING AHEAD.

10 THERE WAS NO PREJUDICE, YOUR HONOR. PLAINTIFFS OBTAINED
11 THE RELEVANT DOCUMENTS. THEY OBTAINED THE RELEVANT TESTIMONY,
12 INCLUDING ON THE THREE BITS: MANDY LIU TESTIMONY, BERT LEUNG
13 TESTIMONY AND CAITLIN SADOWSKI TESTIMONY. SHE IS THE CHROME
14 ENGINEER WHO KNOWS THE MOST, ONE OF THE FOREMOST EXPERTS OF THE
15 DATA THAT CHROME SENDS TO GOOGLE.

16 THEY HAVE NOT BEEN PREJUDICED DURING THE SPECIAL MASTER
17 PROCESS. THE SPECIAL MASTER HAS BEEN VERY DILIGENT IN DIGGING
18 FURTHER, MAKING SURE THAT IF THERE IS ANY WHIFF OF ADDITIONAL
19 INFORMATION THAT MAY BE RELEVANT, THAT SHOULD BE DISCLOSED, TO
20 ASK US TO DISCLOSE IT, AND WE HAVE COMPLIED.

21 PLAINTIFFS HAVE NOT BEEN PREJUDICED IN EXPERT DISCOVERY
22 THAT. THAT ONE IS A LITTLE CURIOUS BECAUSE ONLY A MONTH --
23 ONLY LAST MONTH WE AGREED TO, AT AN ARM'S LENGTH NEGOTIATION,
24 TO EXTEND THE EXPERT SCHEDULE, IT WAS RECENTLY ALSO GRANTED BY
25 JUDGE GONZALEZ ROGERS. HAD THERE BEEN ANY CONCERN THAT EXPERT

1 DISCOVERY WOULD BE PREJUDICED BY THESE REVELATIONS, THAT SHOULD
2 HAVE BEEN TAKEN INTO ACCOUNT. IT WAS NOT.

3 AND LASTLY, YOUR HONOR, PLAINTIFFS HAVE NOT BEEN
4 PREJUDICED IN REBUTTING GOOGLE'S CONTENTIONS.

5 TO THE EXTENT THEY STILL DON'T HAVE THE EVIDENCE TO REBUT
6 OUR CONTENTIONS, THERE'S NO AMOUNT OF EVIDENCE THAT WILL EVER
7 CURE THAT.

8 FINALLY, YOUR HONOR -- OR NOT FINALLY.

9 THIRD -- I'M SORRY -- THE RELIABILITY OF THE X-CLIENT DATA
10 HEADER IS NOT -- WE AGREE WITH MR. BOIES, THAT'S REALLY NOT
11 WHAT'S AT ISSUE.

12 HOWEVER, IT DOES UNDERLIE BOTH THE PREJUDICE AND THE
13 CONCEALMENT DETERMINATIONS THAT YOUR HONOR NEEDS TO MAKE. AND
14 THAT IS FOR THIS REASON: THE X-CLIENT DATA HEADER HAS BEEN A
15 PART OF THIS LITIGATION SINCE DAY ONE. INITIALLY IT WAS IN THE
16 COMPLAINT AS A UNIQUE IDENTIFIER THAT GOOGLE USED TO IDENTIFY
17 PEOPLE.

18 NEXT, THE COMPLAINT WAS AMENDED. NOW IT IS THE IDENTIFIER
19 THAT PLAINTIFFS WILL USE TO IDENTIFY THEIR CLASS, TO ASCERTAIN
20 THEIR CLASS.

21 ON THAT BASIS, THE DISCOVERY HAS BEEN ROBUST. THERE WAS A
22 30(B)(6) WITNESS -- THERE WAS A 30(B)(6) WITNESS ON THIS ISSUE.
23 HE TESTIFIED TO ALL THE REASONS WHY THE X-CLIENT DATA HEADER IS
24 NOT RELIABLE. THERE WAS NO FOLLOW-UP. THIS WAS IN JUNE OF
25 2021.

1 FURTHER, THERE WERE HUNDREDS OF DOCUMENTS PRODUCED ABOUT
2 THE PROJECT, WHICH IS THE PROJECT THAT STARTED IN 2019, AND AS
3 FAR AS THAT, MR. LIAO WAS ONE OF THE PEOPLE MOST RELEVANT. WE
4 OFFERED HIM FOR A DEPOSITION ON AUGUST 31, 2021.

5 THE DEPOSITION WAS NOT TAKEN UNTIL DECEMBER 2021, AND
6 PLAINTIFFS DID NOT ASK A SINGLE QUESTION ABOUT THE
7 MAYBE_CHROME_INCOGNITO BIT TO MR. LIAO.

8 THIS -- FOR THAT REASON, THE X-CLIENT DATA HEADER HAS
9 ALWAYS BEEN A PART OF THIS LITIGATION, AND FOR THAT REASON,
10 THERE HAS BEEN BRIEFING, THERE HAS BEEN ARGUMENT, THERE HAS
11 BEEN SUPPLEMENTAL BRIEFING, INCLUDING IN FRONT OF THE SPECIAL
12 MASTER, AND AS A RESULT OF THAT EXTENSIVE BRIEFING AND
13 DISCOVERY, THERE WAS A FINDING WITH RESPECT TO THE X-CLIENT
14 DATA HEADER.

15 PLAINTIFFS ASKED FOR ALL EVENT LEVEL DATA WHERE THE
16 X-CLIENT DATA HEADER WAS ABSENT FOR THE PURPOSE OF IDENTIFYING
17 THEIR CLASS AND DAMAGES.

18 IT WAS DENIED.

19 AND THAT IS WHY IT'S RELEVANT TO THIS, TO THIS SANCTIONS
20 HEARING, BECAUSE THE -- THE RELIABILITY DETERMINATION OF THE
21 X-CLIENT DATA HEADER CARRIES FROM THE PROJECT INTO THE
22 CONTINUATION OF THE PROJECT, WHICH GAVE RISE TO THE BIT.

23 THE X-CLIENT DATA HEADER, WE'VE BEEN HERE BEFORE, YOUR
24 HONOR.

25 FINALLY, THIS ALL LEADS ME TO CONCLUDE THAT THE EVIDENCE

1 WILL SHOW THERE SHOULD BE NO SANCTIONS. THE LAW DOES NOT
2 SUPPORT THE SANCTIONS THAT PLAINTIFFS SEEK.

3 THE PRECLUSION SANCTIONS ARE NOT ONLY EXTREME AND
4 UNWARRANTED ON THE FACTS, BUT THEY DON'T EVEN FOLLOW WHAT
5 PLAINTIFFS CLAIM THE EVIDENCE WILL SHOW, BECAUSE PLAINTIFFS
6 CLAIM GOOGLE HID THE MAYBE_CHROME_INCOGNITO BIT.

7 AS PRECLUSION SANCTIONS, THEY SEEK THAT THE COURT FIND
8 THAT THE CHROME INCOGNITO BIT WAS A RELIABLE DETERMINATION FOR
9 INCOGNITO, AND THAT GOOGLE CAN LINK INCOGNITO DATA TO
10 PLAINTIFFS.

11 THERE IS NO RELIABLE EVIDENCE FOR THAT, NO BASIS FOR THAT
12 DETERMINATION.

13 AND THEN EVEN MORE, A LEGAL DETERMINATION THAT THE CLASS
14 IS ASCERTAINABLE.

15 THAT DOES NOT FOLLOW FROM EVEN -- EVEN IF YOU GIVE THE
16 BENEFIT OF THE DOUBT TO THE FACTS THAT PLAINTIFFS SAY THEY WILL
17 ADDUCE.

18 AN ADVERSE JURY INSTRUCTION IS SIMILARLY INAPPROPRIATE
19 HERE, AND THAT'S BECAUSE IT'S BOTH INCORRECT -- THE JURY
20 INSTRUCTION THAT THEY SEEK IS THAT GOOGLE HID EVIDENCE, THE
21 CONCEALED EVIDENCE RELATED TO DETECTION OF THE INCOGNITO MODE.
22 THAT IS INCORRECT.

23 BUT IN ADDITION TO THAT, IT WOULD BE EXTREMELY PREJUDICIAL
24 AND UNHEARD OF TO TELL THE JURY THAT GOOGLE HID A FACT WHICH
25 THEY DON'T NEED TO MAKE THEIR DETERMINATION BECAUSE THE

1 DETERMINATION THAT THE CLASS IS ASCERTAINABLE WILL BE MADE BY
2 THE JUDGE AT CLASS CERT OR -- THE REVERSE OF THAT
3 DETERMINATION, WE BELIEVE.

4 FINALLY, YOUR HONOR, REIMBURSEMENT OF THE SPECIAL MASTER
5 FEES, IT'S JUST NOT ACCORDING TO THE LAW. THE FEES -- THE
6 FEES, AT BEST, SHOULD BE THE FEES THAT WENT INTO PREPARING THE
7 MOTION, AND WE THINK THAT EVEN IS NOT APPROPRIATE.

8 THANK YOU, YOUR HONOR, FOR YOUR TIME.

9 THE COURT: THANK YOU, MS. TREBICKA.

10 ALL RIGHT. FROM PLAINTIFF, PLEASE.

11 MR. BOIES: THANK YOU, YOUR HONOR.

12 LET ME BEGIN BY SUMMARIZING WHAT WE BELIEVE GOOGLE'S
13 MISCONDUCT WAS THAT IS AT ISSUE HERE.

14 AND IF WE CAN PUT UP THE CHART NUMBER 5.

15 THE CLERK: DID IT COME UP FOR YOU?

16 THE COURT: NO. NOW IT IS.

17 MR. BOIES: FIRST, GOOGLE DID NOT DISCLOSE RELEVANT
18 KEY EMPLOYEES.

19 SECOND, GOOGLE DID NOT PRODUCE RELEVANT KEY DOCUMENTS.

20 THIRD, GOOGLE MISREPRESENTED PRESERVATION BURDENS.

21 FOURTH, GOOGLE SUBMITTED AN INACCURATE DECLARATION FROM
22 MR. GOLUEKE.

23 FIFTH, GOOGLE EMPLOYEE CHRIS LIAO PROVIDED INACCURATE
24 TESTIMONY.

25 SIXTH, GOOGLE OMITTED INCOGNITO-DETECTION FIELDS FROM THE

1 SCHEMA THAT IT PRODUCED.

2 AND, SEVENTH, GOOGLE DESTROYED AND FAILED TO PRODUCE
3 PLAINTIFFS' DATA THAT IT HAD BEEN ORDERED TO PRODUCE.

4 NOW, COUNSEL SUGGESTED IN HER OPENING THAT THERE HAD NOT
5 BEEN ANY PREJUDICE.

6 THERE'S BEEN AT LEAST FOUR KINDS OF PREJUDICE, YOUR HONOR.

7 FIRST, WE HAVE MISSING DOCUMENTS THAT ARE STILL MISSING.
8 AND I SAID EARLIER IN THE OPENING, WE STILL HAVE NOT GOTTEN A
9 SINGLE DOCUMENT THAT MENTIONS THE IS_CHROME_INCOGNITO FIELD.

10 SECOND, THERE'S MISSING TESTIMONY. BECAUSE WE DID NOT
11 KNOW WHO THE PEOPLE WERE AND BECAUSE WE DID NOT HAVE THE
12 DOCUMENTS AT THE TIME, WE WERE NOT ABLE TO TAKE THOSE PEOPLE'S
13 DEPOSITIONS; OR IF WE DID TAKE THOSE DEPOSITIONS, WE WERE NOT
14 ON NOTICE AS TO WHAT WE WOULD ASK QUESTIONS ABOUT.

15 COUNSEL IN HER OPENING SAYS THAT WHEN I THINK IT WAS
16 MR. LIAO WAS DEPOSED, HE WAS NOT ASKED A SINGLE QUESTION ABOUT
17 ONE OF THE INCOGNITO DETECTION BITS.

18 WELL, WE STILL HAD NEVER HAD IDENTIFIED TO US THE
19 IS_CHROME_INCOGNITO BIT. WE COULDN'T HAVE ASKED HIM ANY
20 QUESTIONS ABOUT THAT BECAUSE THEY HAD NOT GIVEN US A SINGLE
21 DOCUMENT OR A SINGLE IDENTIFICATION THAT THAT FIELD EVEN
22 EXISTED.

23 THEY HAD GIVEN US, I BELIEVE IT WAS ONE DOCUMENT. IN HER
24 OPENING, SHE SUGGESTED IT WAS TWO DOCUMENTS. AND MAYBE WE
25 MISSED ONE, BUT SHE DIDN'T IDENTIFY WHAT THE DOCUMENTS WERE, SO

1 I WASN'T ABLE TO CHECK IT AT THE TIME.

2 BUT IT'S EITHER ONE OR TWO DOCUMENTS, WE THINK IT'S ONE,
3 THAT MENTIONED THE IS_CHROME_NON_INCOGNITO BIT, JUST ONE OR TWO
4 DOCUMENTS, AND ENTIRELY OUT OF CONTEXT, ENTIRELY NOT SHOWING
5 WHAT IT WAS BEING USED FOR, ENTIRELY UNTETHERED FROM ANY USE
6 AND RECORDING AND LOGS.

7 THERE WAS NO BASIS, BASED ON THOSE TWO DOCUMENTS.

8 THEY CANNOT, I RESPECTFULLY SUGGEST TO THE COURT, HOLD
9 BACK ALL THE DOCUMENTS OR MOST OF THE DOCUMENTS AND DRIBBLE OUT
10 ONE OR TWO AND THEN SAY, YEAH, BUT YOU WERE ON NOTICE.

11 THAT'S NOT WHAT DISCOVERY IS ABOUT. THAT'S NOT THEIR
12 OBLIGATION UNDER FEDERAL RULES. IT'S NOT THEIR OBLIGATION
13 UNDER THE COURT'S ORDER.

14 NOW, WITH RESPECT TO THE THIRD BIT, THE
15 MAYBE_CHROME_INCOGNITO BIT, THAT THEY GAVE US SOMEWHERE BETWEEN
16 15 AND 20 DOCUMENTS BEFORE WE RAISED THE ISSUE THAT RELATES TO
17 THIS MOTION.

18 WE ALREADY KNOW THAT THAT'S LESS THAN 10 PERCENT OF THE
19 DOCUMENTS THAT THEY HAD BECAUSE THEY PRODUCED NINE TIMES AS
20 MANY DOCUMENTS SINCE WE RAISED THIS ISSUE AS THEY DID DURING
21 DISCOVERY.

22 SO THEY MAY HAVE GIVEN US THE TIP OF THE ICEBERG, BUT THEY
23 DID NOT GIVE US THE BULK OF THOSE DOCUMENTS, AND THEY WERE --
24 THEY WERE OBLIGATED DO THAT.

25 A PARTY DOES NOT HAVE THE RIGHT TO HAVE A SET OF RELEVANT

1 DOCUMENTS AND SAY, WE'RE ONLY GOING TO GIVE YOU SOME AND WE'RE
2 GOING TO HOLD BACK THE ONES THAT ENABLE YOU TO UNDERSTAND
3 WHAT'S REALLY GOING ON.

4 SO THOSE, THOSE DOCUMENTS WERE WITHHELD, AND WE COULDN'T
5 ASK QUESTIONS ABOUT THEM BECAUSE WE DIDN'T HAVE THEM.

6 IN ADDITION, DATA WAS DESTROYED. WE ARGUED PRESERVATION
7 TO THE COURT, AND GOOGLE CAME IN AND SAID, THERE'S SO MUCH
8 BURDEN HERE AND WE CANNOT FIND A WAY TO AVOID THAT. AND THE
9 COURT SAID, WELL, THE BURDEN IS JUST TOO GREAT. I'M NOT GOING
10 TO FORCE THEM TO DO THAT.

11 BUT IF THEY HAD DISCLOSED THESE DETECTION BITS, WE COULD
12 HAVE SAID, OKAY, AT LEAST PRESERVE THE DATA THAT YOU HAVE FROM
13 THESE DETECTION SIGNALS. AT LEAST PRESERVE THE DATA THAT YOU
14 HAVE FROM IS_CHROME_INCOGNITO, IS_CHROME_NON_INCOGNITO,
15 MAYBE_CHROME_INCOGNITO, PRESERVE THOSE FIELDS.

16 THAT WOULDN'T HAVE BEEN BURDENSOME.

17 BUT BECAUSE WE DIDN'T KNOW ABOUT IT, WE COULDN'T MAKE THAT
18 ARGUMENT TO THE COURT. AND BECAUSE WE COULDN'T MAKE THAT
19 ARGUMENT TO THE COURT, THAT RELEVANT DATA GOT SWEEPED UP WITH
20 EVERYTHING ELSE THAT GOOGLE WAS PERMITTED TO DESTROY.

21 AND FOURTH, THERE'S BEEN AN ENORMOUS AMOUNT OF TIME AND
22 MONEY WASTED. IT'S NOT JUST THE -- IT'S NOT JUST THE TIME AND
23 MONEY THAT IT'S TAKEN TO BRING THIS MOTION. WE HAD TO INFER,
24 GUESS, TRACK, IN EFFECT BECOME DETECTIVES TO TRY TO FIND OUT
25 ABOUT DOCUMENTS AND DATA THAT THEY WERE OBLIGATED TO TELL US

1 ABOUT.

2 THE IS_CHROME_INCOGNITO MODE, THEY NEVER TOLD US ABOUT
3 THAT, EVEN WHEN THEY WERE TELLING US ABOUT OTHER BITS. WE
4 ASKED -- WE FINALLY ASKED A QUESTION ABOUT THAT BECAUSE ONE OF
5 OUR EXPERTS SAID, WELL, IF THERE'S A IS_CHROME_NON_INCOGNITO,
6 MAYBE THERE'S A FIELD THAT'S IS_CHROME_INCOGNITO.

7 THAT ISN'T THE KIND OF BURDEN THAT THE FEDERAL RULES PLACE
8 UPON A PARTY. IT'S NOT HIDE THE BALL. IT'S NOT SEE HOW CLEVER
9 WE CAN MAKE THEM BE TO FIND OUT WHAT THE FACTS ARE.

10 IT IS WHEN THEY HAVE RELEVANT DOCUMENTS AND DATA, THEY'VE
11 GOT AN OBLIGATION TO PRODUCE THEM TO US AND THEY DIDN'T DO
12 THAT.

13 NOW, LET ME TURN TO THESE INCOGNITO DETECTION BITS AND
14 SPEND A LITTLE TIME JUST ON THE BACKGROUND FOR THAT.

15 AND WE'RE GOING TO BE TALKING ABOUT LOGS THAT LOG THESE
16 SIGNALS, AND I THINK IT'S USEFUL TO FOCUS ON THE STEPS THAT
17 HAVE TO BE TAKEN TO CREATE LOGS.

18 FIRST, GOOGLE COLLECTS DATA; SECOND, GOOGLE CREATES
19 FIELDS; THIRD, GOOGLE PROCESSES THE DATA TO POPULATE SELECTED
20 FIELDS TO CREATE LOGS.

21 NOW, ONE OF THE THINGS THAT'S IMPORTANT IS THAT ONCE A
22 FIELD HAS BEEN CREATED LIKE THIS, IT CAN BE USED IN A LARGE
23 NUMBER OF LOGS; THAT IS, IT'S NOT BURDENSOME, IT'S NOT
24 TECHNOLOGICALLY DIFFICULT OR TIME CONSUMING TO USE A FIELD THAT
25 HAS BEEN CREATED IN MULTIPLE NUMBER OF LOGS.

1 IF WE HAD KNOWN ABOUT THESE FIELDS AND IF WE HAD PRESERVED
2 THE DATA NECESSARY TO POPULATE THOSE FIELDS, WE COULD HAVE
3 PRESENTED TO THE COURT EXACTLY THE KIND OF INFORMATION THAT THE
4 COURT KNOWS THE PLAINTIFFS HAVE BEEN ASKING FOR OVER AND OVER
5 AGAIN.

6 THIS IS NOT SOME OBSCURE ISSUE ABOUT PRIVATE BROWSING.
7 THERE CANNOT, I RESPECTFULLY SAY TO THE COURT, HAVE BEEN ANY
8 DOUBT IN GOOGLE'S MIND WHAT WE WERE LOOKING FOR. WE WERE NOT
9 ONLY LOOKING FOR DATA ABOUT INCOGNITO THAT WAS OVER IN THIS
10 BUCKET OR OVER IN THIS BUCKET.

11 THAT'S NOT WHAT OUR INTERROGATORIES SAID. THAT'S NOT WHAT
12 THE COURT ORDER SAID.

13 WHAT THEY WERE OBLIGATED TO DO WAS GIVE US ALL OF THE DATA
14 THAT THEY HAD, ALL OF THE DOCUMENTS THAT THEY HAD THAT RELATED
15 TO TRACKING INCOGNITO USE AND USERS.

16 THEY DIDN'T DO THAT.

17 AND IF I COULD JUST PUT UP A TYPICAL USER TRACKING LOG.

18 AND LOGS WILL HAVE DIFFERENT FIELDS. THIS PARTICULAR LOG
19 MIGHT HAVE AN I.P. ADDRESS, USER AGENT DATA, URL'S, I'VE PUT IN
20 HERE THE IS_CHROME_INCOGNITO FIELD, AND THE BISCOTTI
21 IDENTIFIER, ZWIEBACK IDENTIFIER, PPID, ANALYTICS UID, OTHER
22 FIELDS.

23 ONE OF THE THINGS THAT'S IMPORTANT IN UNDERSTANDING THE
24 LOGS IS THAT THE DATA THAT IS IN THESE FIELDS CAN BE USED IN
25 CONJUNCTION WITH OTHER DATA THAT IS IN THESE FIELDS.

1 GOOGLE CLAIMS, AND WE'RE GOING TO DISPUTE THIS, BUT GOOGLE
2 CLAIMS THAT THE IS_CHROME_INCOGNITO AND THE
3 MAYBE_CHROME_INCOGNITO FIELDS ARE NOT THEMSELVES COMPLETELY
4 ACCURATE OR DO NOT COMPLETELY IDENTIFY USERS.

5 WE THINK -- WE DISPUTE THAT.

6 BUT IN ADDITION TO THAT, EVEN IF THAT WERE TRUE -- AND
7 YOU'RE GOING TO HEAR THIS FROM ONE OF THE EXPERTS -- YOU CAN
8 USE OTHER PIECES OF DATA THAT ARE IN THERE IN CONJUNCTION WITH
9 THAT, FOR EXAMPLE, TO IDENTIFY USERS.

10 BUT WHEN YOU'RE DEPRIVED OF ONE OF THOSE DATA SETS, YOU
11 ARE UNABLE -- YOU'RE UNABLE TO DO THAT.

12 LET ME DIRECT THE COURT'S ATTENTION TO FOUR DOCUMENTS --
13 AND THESE ARE THE EXHIBITS FOR THE HEARING NUMBERING -- 19, 20,
14 87, AND 88.

15 AND WE WON'T REVEAL THE -- AT LEAST SOME OF THESE
16 DOCUMENTS ARE SEALED.

17 LET ME PUT UP A DEMONSTRATIVE FOR THE COURT THAT WILL GIVE
18 THE COURT A PORTION OF EACH OF THOSE DOCUMENTS THAT THE COURT
19 CAN LOOK AT IN THE CONTEXT OF THE DOCUMENTS WHICH THE COURT
20 WILL HAVE AVAILABLE TO IT.

21 ON JUNE 9, 2020, MR. LEUNG NOTED THE "PRIVACY RISK OF
22 LOGGING INFERRED CHROME INCOGNITO DETENTION," AND SOUGHT
23 "FEEDBACK FROM PRIVACY GURUS."

24 THIS WAS PART OF THE INCOGNITO DETECTION WORK THAT WAS
25 GOING ON AT THAT TIME.

1 THIS DOCUMENT WAS NOT PRODUCED TO US -- IT'S A
2 JUNE 9, 2020 DOCUMENT. IT WAS NOT PRODUCED TO US UNTIL
3 FEBRUARY 18TH OF 2022.

4 EXHIBIT 19 IS MARCH 5, 2021, AND THERE MR. LIU -- OR
5 MS. LIU WAS TALKING ABOUT, "A LONG TERM SOLUTION IS IN NEED TO
6 PROVIDE A STANDARD WAY TO DETECT AND MONITOR INCOGNITO."

7 THIS IS A MARCH 5, 2021 DOCUMENT. WE DID NOT GET IT UNTIL
8 FEBRUARY 18, 2022, AFTER MOST OF THE DEPOSITIONS WERE OVER
9 WITH.

10 NOW, WITH RESPECT TO THE ISSUE OF ADEQUACY, AS I SAID --
11 AND I THINK WE MAY HAVE AGREEMENT FROM COUNSEL ON THIS -- THEIR
12 CLAIM THAT THIS BIT IS NOT, OR THIS FIELD OR THIS SIGNAL IS NOT
13 AN ACCURATE OR COMPLETELY ACCURATE OR DEFINITELY ACCURATE WAY
14 TO DETERMINE INCOGNITO USE AND USERS IS NOT REALLY RELEVANT TO
15 THIS MOTION.

16 WE'RE ENTITLED TO HAVE THAT INFORMATION. ON ITS FACE,
17 IT'S RELEVANT. ON ITS FACE, IT'S CALLED FOR. AND WE'RE
18 ENTITLED TO HAVE THAT INFORMATION SO THAT WE AND OUR OWN
19 EXPERTS CAN MAKE THAT DETERMINATION AND PRESENT THAT
20 INFORMATION TO THE FINAL DETERMINATION OF THE JUDGE AND JURY.

21 HOWEVER, I THINK IN TERMS OF THE SIGNIFICANCE, IT IS WORTH
22 NOTING THAT GOOGLE ITSELF THOUGHT THAT THESE DETECTION BITS
23 WERE RELIABLE. AND, FOR EXAMPLE, IF I BEGIN WITH EXHIBIT 87,
24 WHICH GOES BACK TO MAY 15TH, 2020, WHAT YOU SEE IS GOOGLE
25 CONCLUDING THAT AN INCOGNITO USAGE OF 3.08 PERCENT IS "GROUND

1 TRUTH" FOR ANALYSIS OF INCOGNITO.

2 THAT IS -- THAT IS WHAT THEY CONCLUDED FROM THE UMA DATA
3 WAS THE AMOUNT OF INCOGNITO USAGE.

4 AND WHAT THEY THEN DID WITH THESE INCOGNITO DETECTION
5 FIELDS IS THEY TRIED TO COMPARE THE RESULTS FROM THOSE FIELDS
6 WITH THIS 3 PERCENT NUMBER TO TRY TO SEE WHETHER THE INCOGNITO
7 DETECTION BITS WERE REALLY ACCURATELY TRACKING AND CAPTURING
8 INCOGNITO USAGE.

9 AND IF WE GO BACK TO THE PRIOR EXHIBIT, WHICH -- OR MAYBE
10 I CAN PUT UP THE FIRST PAGE OF EXHIBIT 88.

11 IF YOU SEE FEBRUARY 3, 2022 -- AND THESE WERE NOTES THAT
12 MS. LIU TESTIFIED WERE HER NOTES AND THAT REFLECTED MEETINGS
13 THAT SHE'D HAD WITH MR. LEUNG -- AND YOU SEE THE SECOND BULLET
14 DOWN, "GOOD NEWS: CHROME INCOGNITO RATE IS APPROXIMATELY 3
15 PERCENT."

16 SO WHAT THEY WERE DOING IS THEY WERE CONSTANTLY TRACKING
17 THIS AND DETERMINING THAT THE DATA THAT THEY WERE GETTING FROM
18 THESE INCOGNITO BITS ACCURATELY REFLECTED INCOGNITO USAGE.

19 THIS TESTIMONY IS ALSO, I THINK, RELEVANT TO THE QUESTION
20 THAT WE'LL DEAL WITH IN A LITTLE WHILE AS TO WHETHER THESE
21 BITS, AS WAS TESTIFIED BY MR. LIAO, HAD BEEN -- HAD NOT BEEN
22 ABANDONED.

23 AT THIS POINT -- AND BEFORE GOING ON TO THE SEVEN ELEMENTS
24 THAT I IDENTIFIED AT THE BEGINNING WHERE WE BELIEVE GOOGLE HAS
25 NOT FULFILLED ITS DISCOVERY OBLIGATIONS, I'M GOING TO PAUSE AND

1 WE'RE GOING TO PUT ON OUR EXPERT WITNESS THAT MR. MAO WILL
2 HANDLE.

3 THE COURT: ALL RIGHT.

4 MR. BOIES: THANK YOU, YOUR HONOR.

5 THE COURT: THANK YOU, MR. BOIES.

6 MR. MAO: SORRY, YOUR HONOR. I'VE GOT VOLUMES HERE.
7 IF YOU'LL GIVE ME A SECOND.

8 THE COURT: I KNOW JUST HOW IT FEELS, MR. MAO.

9 (PAUSE IN PROCEEDINGS.)

10 MR. MAO: YOUR HONOR, I WOULD LIKE TO CALL
11 MR. CHRISTOPHER THOMPSON TO THE STAND IF THAT IS OKAY WITH YOU.

12 THE COURT: ALL RIGHT.

13 MR. THOMPSON, COME ON UP AND REMAIN STANDING AND THE COURT
14 REPORTER -- THE COURTROOM DEPUTY WILL SWEAR YOU IN.

15 THE CLERK: PLEASE RAISE YOUR RIGHT HAND.

16 **(PLAINTIFFS' WITNESS, CHRISTOPHER THOMPSON, WAS SWORN.)**

17 THE WITNESS: I DO.

18 THE CLERK: THANK YOU. HAVE A SEAT.

19 MR. MAO: I APOLOGIZE, YOUR HONOR. IF YOU CAN GIVE
20 ME A SECOND? WE'RE MISSING ONE BINDER.

21 THE COURT: MR. THOMPSON, IF YOU'RE COMFORTABLE WITH
22 REMOVING YOUR MASK, THAT WOULD BE HELPFUL TO THE COURT
23 REPORTER.

24 THE WITNESS: CERTAINLY.

25 THE COURT: THANK YOU.

1 THE WITNESS: SHOULD I ADJUST THIS A LITTLE BIT?
2 WOULD THAT HELP AS WELL?

3 THE COURT: YES, PLEASE.

4 MR. MAO: BACK ON THE RECORD.

5 YOUR HONOR, I THINK IT WOULD BE OF ASSISTANCE TO
6 MR. THOMPSON IF HE HAD HIS EXHIBITS WITH HIM.

7 THE COURT: OKAY.

8 MR. MAO: WE'VE MADE COPIES FOR OPPOSING COUNSEL, AND
9 YOUR HONOR HAS COPIES OF THE EXHIBITS.

10 THE COURT: I DO.

11 MR. MAO: I JUST WANT TO PROFFER TO MY OPPOSING
12 COUNSEL SO HE SEES THAT WHAT I'M OFFERING MR. THOMPSON IS THE
13 SAME THING AS WHAT HE HAS.

14 MR. SCHAPIRO: YES.

15 MR. MAO: THANK YOU.

16 YOUR HONOR, MAY I APPROACH?

17 THE COURT: YES, PLEASE.

18 MR. MAO: (HANDING.)

19 THE WITNESS: THANK YOU.

20 MR. SCHAPIRO: SORRY, MARK. I THOUGHT YOU WERE
21 HANDING ME A BINDER.

22 MR. MAO: YOU HAVE THEM.

23 MR. SCHAPIRO: OH, WE DO. THANK YOU. ALL GOOD.

24 MR. MAO: WE'RE GOOD?

25 THE CLERK: HE WAS SWORN IN.

1 THE REPORTER: DID WE HAVE HIM STATE HIS NAME?

2 THE COURT: PLEASE STATE YOUR FULL NAME FOR THE
3 RECORD.

4 THE WITNESS: MY NAME IS CHRISTOPHER MICHAEL
5 THOMPSON.

6 THE COURT: AND, MR. MAO, YOU MAY REMOVE YOUR MASK IF
7 YOU WOULD LIKE.

8 MR. MAO: OH, YES.

9 THE COURT: IT'S NOT REQUIRED. MADAM COURT REPORTER
10 WILL LET YOU KNOW.

11 MR. MAO: OKAY. I DID NOT ACTUALLY REALIZE HOW
12 STRAINING IT IS TO ARGUE WITH A MASK.

13 THANK YOU, YOUR HONOR.

14 **DIRECT EXAMINATION**

15 BY MR. MAO:

16 Q. MR. THOMPSON --

17 IF YOU DON'T MIND, I WOULD LIKE TO INTRODUCE INTO THE
18 EXHIBIT THOMPSON EXHIBIT A.

19 THIS IS PART OF HIS DECLARATION IN SUPPORT OF THE REPLY
20 FOR THE ORDER TO SHOW CAUSE.

21 MR. SCHAPIRO: NO OBJECTION.

22 THE COURT: ALL RIGHT. EXHIBIT A WILL BE ADMITTED.

23 (PLAINTIFFS' EXHIBIT A WAS ADMITTED IN EVIDENCE.)

24 BY MR. MAO:

25 Q. MR. THOMPSON, GOOD MORNING.

1 IF I CAN TROUBLE YOU, CAN YOU PLEASE TAKE A LOOK AT
2 EXHIBIT A AND TELL ME IF THAT IS A TRUE AND ACCURATE COPY OF
3 YOUR CV?

4 A. SURE THING.

5 (PAUSE IN PROCEEDINGS.)

6 THE WITNESS: YES, THIS LOOKS ACCURATE.

7 BY MR. MAO:

8 Q. COULD YOU TELL ME A LITTLE BIT ABOUT YOUR EDUCATIONAL
9 BACKGROUND?

10 A. SURE THING.

11 I GRADUATED FROM VANDERBILT UNIVERSITY IN 2010 WITH AN
12 UNDERGRADUATE DEGREE IN COMPUTER ENGINEERING.

13 Q. HOW MANY PUBLICATIONS HAVE YOU PUBLISHED IN THE GENERAL
14 AREA OF COMPUTER SCIENCES?

15 A. I WOULD NEED TO COUNT THESE, BUT APPROXIMATELY 10 TO 15.

16 Q. YOU HAVE A NUMBER OF PATENTS IN THE AREA AS WELL; IS THAT
17 CORRECT?

18 A. YES, THAT'S CORRECT.

19 Q. CAN YOU TELL ME A LITTLE BIT ABOUT ANY RELEVANT WORK
20 EXPERIENCE YOU MAY HAVE IN THE AREA OF COMPUTER SCIENCE?

21 A. SURE THING.

22 SO I'VE WORKED IN THE AREA OF COMPUTER SCIENCE FOR 10 TO
23 11 YEARS NOW. I'VE WORKED WITH EVERYTHING FROM MOBILE
24 APPLICATIONS TO NETWORK CONNECTIONS, DISTRIBUTED SYSTEMS, AND
25 VARIOUS DATABASE AND STORAGE APPLICATIONS.

1 MR. MAO: OKAY. YOUR HONOR, I WOULD LIKE TO PROFFER
2 THE WITNESS AS A WITNESS GENERALLY JUST FOR THESE -- EXPERT
3 WITNESS JUST GENERALLY FOR THESE PROCEEDINGS FOR THE PURPOSES
4 OF EXPLAINING VARIOUS THINGS IN THE BACKGROUND UNDER RULE 26.

5 THE COURT: OKAY.

6 MR. SCHAPIRO: MAY I HAVE A BRIEF VOIR DIRE?

7 **VOIR DIRE EXAMINATION**

8 BY MR. SCHAPIRO:

9 Q. MR. THOMPSON, YOU SAID YOU HAVE AN UNDERGRADUATE DEGREE IN
10 COMPUTER ENGINEERING. THAT'S FROM VANDERBILT?

11 A. THAT'S CORRECT.

12 Q. DO YOU HAVE A MASTER'S DEGREE OR A PH.D. IN ANY FIELDS
13 RELATED TO COMPUTERS?

14 A. I DO NOT.

15 Q. AND WHO'S YOUR CURRENT EMPLOYER?

16 A. MY CURRENT EMPLOYER IS I'M SELF-EMPLOYED.

17 MR. SCHAPIRO: WE WON'T OBJECT FOR THE PURPOSE OF
18 THIS HEARING.

19 THE COURT: THANK YOU.

20 MR. MAO: THANK YOU, YOUR HONOR.

21 THE COURT: YOU MAY PROCEED.

22 MR. MAO: OKAY. CAN WE PUT UP THE SLIDES FOR
23 MR. THOMPSON.

24 ///

25 ///

DIRECT EXAMINATION (RESUMED)

BY MR. MAO:

Q. YES. MR. THOMPSON, I UNDERSTAND THAT YOU --

THE COURT: MR. MAO, EXCUSE ME. JUST FOR
HOUSEKEEPING --

MR. MAO: YES.

THE COURT: -- YOU REFERRED TO THOMPSON EXHIBIT A.
DID WE WORK OUT A NUMBERING OR LETTERING PROTOCOL?
BECAUSE I THOUGHT PLAINTIFFS HAD NUMBERS.

MR. MAO: OH, WE DO.

DID WE PROFFER THE CORRELATION TO THAT?

SO THERE SHOULD BE AN INDEX KIND OF -- SORRY, BECAUSE OF
THE VARIOUS SUBMISSIONS AT DIFFERENT TIMES --

THE COURT: ALL RIGHT.

MR. MAO: -- THERE SHOULD HAVE BEEN A TABLE. BUT WE
HAVE EXTRA PRINTED COPIES. CAN WE GIVE A COPY TO --

THE COURT: I HAVE A TABLE OF THOMPSON EXHIBITS.

MR. MAO: YEAH, AND --

THE COURT: IS THERE SOMETHING THAT CORRELATES THAT
TO HEARING EXHIBITS?

(DISCUSSION OFF THE RECORD BETWEEN PLAINTIFFS' COUNSEL.)

MR. MAO: SORRY, YOUR HONOR. I GUESS IT'S PART OF
THE THOMPSON EXHIBITS FOLDER, AND THE TABLE IN HERE IS THE
ATTEMPT FOR US TO CORRELATE ACROSS ALL THE EXHIBITS
(INDICATING).

1 IT'S THE FRONT PAGE OF THE FOLDER.

2 THE COURT: YEAH, AND I HAVE THAT.

3 (DISCUSSION OFF THE RECORD BETWEEN PLAINTIFFS' COUNSEL.)

4 MR. MAO: YOUR HONOR, IF YOU DON'T MIND, IT MIGHT BE
5 EASIEST FOR THESE PROCEEDINGS IF WE JUST START WITH 110 BECAUSE
6 109 IS OUR LAST EXHIBIT.

7 THE COURT: OKAY.

8 MR. MAO: SO --

9 THE COURT: THE CV WILL BE --

10 MR. MAO: THE CV, YES, WILL BE 110.

11 THE COURT: -- PLAINTIFFS' EXHIBIT 110, THOMPSON CV.

12 (PLAINTIFFS' EXHIBIT 110, PREVIOUSLY EXHIBIT A, WAS
13 ADMITTED IN EVIDENCE.)

14 BY MR. MAO:

15 Q. MR. THOMPSON, I UNDERSTAND YOU HAD PREPARED SOME
16 EXPOSITORY SLIDES TODAY; IS THAT CORRECT?

17 A. THAT'S CORRECT.

18 Q. IS THAT WHAT YOU HAVE IN FRONT OF YOU --

19 A. THAT'S CORRECT.

20 Q. -- ON THE DISPLAY?

21 MAY WE GO TO THE FIRST PAGE? THANK YOU VERY MUCH.

22 CAN YOU EXPLAIN TO THE COURT AND THE AUDIENCE HERE WHAT
23 YOU HAVE HERE ON THIS FIRST PAGE?

24 A. SURE. IF I MAY GIVE A BRIEF OVERVIEW OF WHERE I'M GOING
25 TO GO?

1 Q. SURE, YES.

2 A. SO I'M INTENDING TO EXPLAIN PRIMARILY THREE POINTS.

3 ONE IS JUST A BRIEF INTRODUCTION, KIND OF A HIGH LEVEL OF
4 EXPLAINING HOW DATA IS TRANSMITTED FROM A USER'S BROWSER TO
5 GOOGLE, AND THEN HOW IT'S LOGGED.

6 FROM THERE I'M GOING TO TALK A LITTLE BIT ABOUT CONNECTING
7 OR JOINING THESE LOGS USING THE VARIOUS IDENTIFIERS THAT
8 MR. BOIES HAS DISCUSSED.

9 AND THEN FINALLY, I'M GOING TO TALK A LITTLE BIT ABOUT THE
10 INCOGNITO BITS AND HOW THEY RELATE TO IDENTIFYING FLAGGING
11 CERTAIN RECORDS THAT CAN THEN BE USED FOR PURPOSES LATER.

12 THE COURT: ALL RIGHT.

13 THE WITNESS: SO TO ANSWER YOUR ORIGINAL QUESTION,
14 MR. MAO, THIS IS AN INITIAL INCOGNITO SPLASH SCREEN. SO THIS
15 IS WHAT'S DISPLAYED WHEN YOU OPEN A NEW INCOGNITO TAB, AND YOU
16 CAN SEE THE CHROME OMNIBAR I'VE HIGHLIGHTED HERE IS THE INPUT
17 THAT THE USER TYPES IN IN ORDER TO TELL CHROME TO DO SOMETHING.

18 AND IN THIS CASE I'VE TYPED "NY TIMES," SO I'M TRYING TO
19 GET TO *THE NEW YORK TIMES*.

20 AND WHAT HAPPENS, AS WE'LL SEE ON THE NEXT SLIDE, IS IF
21 YOU DON'T ENTER A GENERALLY RECOGNIZED URL, CHROME WILL TRIGGER
22 A SEARCH INSTEAD OF TAKING YOU, SAY, TO THENEWYORKTIMES.COM,
23 WHICH IS WHAT WE SEE HERE.

24 SO A SEARCH HAS BEEN DONE FOR *NEW YORK TIMES*. SO WE'VE
25 STARTED IN INCOGNITO, WE'VE TYPED IN "NY TIMES," AND NOW WE'RE

1 ON A SEARCH RESULTS PAGE.

2 AND THEN ON THE NEXT SLIDE I'VE HIGHLIGHTED HERE AN AD
3 THAT IS DISPLAYED WITHIN THE SEARCH RESULTS, AND THIS IS FOR A
4 SUBSCRIPTION THAT *NEW YORK TIMES* IS OFFERING.

5 AND WHEN YOU CLICK ON THAT AD, YOU'RE TAKEN TO THE
6 *NEW YORK TIMES* WEBSITE AS YOU CAN SEE IN THE CALL OUT TO THE
7 LEFT, BUT GOOGLE HAS ALSO EMBEDDED WITHIN THE URL THAT YOU'VE
8 USED TO NAVIGATE TO *THE NEW YORK TIMES* THIS GCL ID, WHICH IS A
9 CLICK ID, AN INDICATOR, A UNIQUE IDENTIFIER INDICATING --
10 GIVING THEM THE ABILITY TO TRACK YOUR ACTIVITY NOW THAT YOU'VE
11 LEFT THE SEARCH PAGE.

12 AND WHAT HAPPENS IS THAT THERE ARE A NUMBER OF SCRIPTS
13 THAT ARE EMBEDDED BEHIND THE SCENES ON THE WEBSITE THAT WILL
14 USE THAT IDENTIFIER THAT'S WITHIN THE URL AND TRANSMIT DATA IN
15 THE BACKGROUND TO GOOGLE SERVERS.

16 Q. IN TERMS OF GOOGLE LOGS, ARE THERE -- IS THERE INFORMATION
17 IN THIS INITIAL STEP THAT YOU MAY NOT BE ABLE TO OBTAIN IN
18 OTHER LOGS, FOR EXAMPLE?

19 A. SURE. SO THE FIRST INTERACTION WITH THE SEARCH ENGINE IS
20 GOING TO EXIST WITHIN ONE SET OF LOGS, WHEREAS THE INTERACTIONS
21 ON *THE NEW YORK TIMES* WEBSITE WILL EXIST IN A SEPARATE SET OF
22 LOGS, AND WE'LL TALK MORE ABOUT THE DIFFERENT TYPES OF LOGS IN
23 A MINUTE AS WELL.

24 Q. SURE. WE'LL MOVE ON TO THE NEXT PAGE. CAN YOU EXPLAIN
25 THAT A LITTLE BIT, MR. THOMPSON?

1 A. SURE. SO THIS IS EFFECTIVELY A DIFFERENT VIEW OF WHAT I
2 JUST SHOWED, AND THIS IS A USER'S BROWSER CONNECTING TO AND
3 TRANSMITTING INFORMATION TO GOOGLE, AND THAT REACHES WHAT'S
4 REFERRED TO AS A FRONTEND SERVER, IT'S THE FIRST SERVER THAT
5 THE BROWSER IS TALKING TO.

6 AND WE SOMETIMES CALL TRANSMISSIONS REQUESTS REGARDLESS OF
7 WHETHER THE USER WAS ACTIVELY DOING SOMETHING OR IF -- IF
8 THEY'RE DOING SOMETHING BEHIND THE SCENES.

9 SO THEN WHAT WILL HAPPEN IS THAT THAT FRONTEND SERVER WILL
10 THEN COMMUNICATE WITH A NUMBER OF WHAT WE REFER TO AS
11 DOWNSTREAM SERVERS, KIND OF LIKE FLOWING DOWN A RIVER.

12 AND I'VE ILLUSTRATED TWO HERE, BUT THERE COULD BE MORE,
13 AND EACH OF THOSE SERVERS ARE GOING TO WRITE TO THEIR OWN LOGS,
14 GENERATING FOR ONE TRANSMISSION A NUMBER OF DIFFERENT LOG
15 ENTRIES.

16 Q. NEXT SLIDE, PLEASE.

17 YOU HAVE THIS TITLED "JOINING DATA: THREE TYPES OF LOGS."
18 CAN YOU EXPLAIN TO ME A LITTLE BIT ABOUT HOW THERE'S THREE
19 TYPES OF LOGS HERE AND THE JOINING YOU'RE REFERRING TO HERE.

20 A. SURE. SO NOW WE'VE MOVED PAST MY FIRST POINT AND WE'RE
21 INTO MY SECOND POINT, WHICH IS HOW DO WE CONNECT AND HOW DO WE
22 LOOK AT THOSE LOGS AND ANALYZE THOSE LOGS TO POTENTIALLY
23 CONNECT THE DATA WITHIN THEM?

24 SO THERE ARE -- FOR THE PURPOSES OF OUR DISCUSSION TODAY,
25 THERE ARE THREE TYPES OF LOGS.

1 AND THINKING ABOUT INCOGNITO DATA, TYPICALLY THAT'S GOING
2 TO BE IN THAT RED BOX, WHICH IS THE B LOGS, B AS IN BOY. AND
3 THAT'S WHAT GOOGLE REFERS AS, QUOTE-UNQUOTE, UNAUTHENTICATED
4 DATA, AND I'VE LISTED ONLY A VERY SMALL SUBSET OF THE FIELDS
5 THAT MAY OCCUR WITHIN THESE LOGS.

6 BUT, FOR INSTANCE, YOU HAVE I.P. ADDRESS, YOU HAVE USER
7 AGENT STRING, YOU HAVE TIMESTAMP, AND YOU HAVE WHAT ARE
8 REFERRED TO AT GOOGLE AS PSEUDONYMOUS IDENTIFIERS, WHICH ARE
9 BASICALLY RANDOM NUMBERS, BUT THEY'RE CARRIED WITHIN THE
10 COOKIES THAT ARE TRANSMITTED TO GOOGLE ALONG WITH THE BROWSER'S
11 TRANSMISSIONS FOR OTHER THINGS.

12 ON THE OTHER SIDE OF THAT, YOU HAVE WHAT ARE CALLED
13 P LOGS, P AS IN PAUL, LOGS, AND THESE CONTAIN WHAT GOOGLE
14 REFERS TO AS AUTHENTICATED DATA. A SIMILAR SET OF FIELDS HERE.
15 YOU'LL SEE THE OVERLAP.

16 BUT THESE ALSO CONTAIN THE GAIA ID, WHICH IS ANOTHER
17 NUMBER THAT YOU CAN KIND OF THINK OF IT AS THE IDENTIFIER THAT
18 CORRESPONDS TO A GOOGLE ACCOUNT, A GMAIL ADDRESS OR SOMETHING
19 LIKE THAT.

20 FINALLY, WE HAVE ANALYTICS LOGS WHICH, AGAIN, ARE SIMILAR,
21 AND THESE CONTAIN AGAIN THE I.P. ADDRESS, THE USER AGENT, THE
22 TIMESTAMP, THE PSEUDONYMOUS ID'S, AND THEY ALSO CONTAIN THIRD
23 PARTY IDENTIFIERS.

24 SO THESE ARE GOING TO CONTAIN, FOR INSTANCE, IF YOU WERE
25 TO SIGN INTO *THE NEW YORK TIMES* OR YOU WERE TO SIGN INTO

1 THE WASHINGTON POST, THE SCRIPTS ON THOSE SITES WOULD TRANSMIT
2 THAT ID TO GOOGLE AND BE RECORDED ALONGSIDE THESE IDENTIFIERS.

3 Q. NEXT SLIDE, PLEASE.

4 SO BEFORE YOU START ON THIS, I WANT TO UNDERSTAND,
5 MR. THOMPSON. DO YOU UNDERSTAND THAT THE COURT HAD REFERRED
6 THE PLAINTIFFS IN THIS CASE TO THE SPECIAL MASTER IN ORDER TO
7 BE ABLE TO TRY TO SEE IF YOU CAN QUERY A STRUCTURE, OR DESIGN
8 QUERIES TO BE ABLE TO GET THEIR DATA FROM PLAINTIFFS' LOGS AND
9 DATABASE?

10 DO YOU UNDERSTAND THAT?

11 A. I DO.

12 Q. OKAY. CAN YOU EXPLAIN TO ME WHAT YOU ARE TRYING TO SHOW
13 HERE ON THIS SLIDE?

14 A. SURE. SO THESE ARE LOG OUTPUTS THAT WERE PRODUCED AS PART
15 OF THE SPECIAL MASTER PROCESS, AND THIS IS JUST ONE EXAMPLE OF
16 MANY, BUT ONE OF THE IMPORTANT THINGS WHEN YOU'RE LOOKING TO
17 QUERY DATA FROM A PARTICULAR DATA SOURCE -- AND THIS IS
18 GENERALLY TRUE OUTSIDE OF THE CONTEXT OF THIS CASE -- IS THAT
19 IT'S IMPORTANT TO UNDERSTAND THE FORMAT THE DATA IS STORED IN.

20 SO, FOR INSTANCE, IF YOU ARE LOOKING TO PERFORM AN EXACT
21 MATCH OR YOU ARE LOOKING TO SEARCH FOR SOMETHING, YOU NEED TO
22 KNOW HOW IT IS ENCODED IN ORDER TO CORRECTLY MATCH AGAINST THE
23 INPUT STREAM.

24 SO THESE THINGS CAN BE ENCODED IN DIFFERENT WAYS FOR A
25 NUMBER OF DIFFERENT REASONS. WHAT WE HAVE HERE IS AN EXAMPLE

1 WHERE WE HAVE TWO DIFFERENT LOGS, BOTH CONTAIN AN I.P. ADDRESS,
2 WE CAN SEE HERE HIGHLIGHTED THE REMOTE HOST FIELD, AND WE CAN
3 SEE THE CLIENT IPS FIELD, AND THEY'RE ACTUALLY, DESPITE LOOKING
4 DIFFERENT, THEY'RE ACTUALLY THE SAME VALUE WITH TWO DIFFERENT
5 REPRESENTATIONS.

6 SO ON THE LEFT WE HAVE WHAT MOST PEOPLE WOULD RECOGNIZE AS
7 AN I.P. ADDRESS, SO IT'S GOT THE DOTS IN IT; AND ON THE RIGHT,
8 THAT SAME VALUE HAS BEEN ENCODED INTO INTEGERS.

9 Q. SO I APOLOGIZE, MR. THOMPSON. I HAVE A POLITICAL SCIENCE
10 DEGREE. SO IF I WERE TO KIND OF REDUCE THIS A LITTLE BIT,
11 WOULD IT BE ACCURATE TO SAY, FOR EXAMPLE, IF I WERE SEARCHING
12 AGAINST A BIBLE FOR CERTAIN TEXT AND I WANT TO FIND SOMETHING,
13 LET'S SAY, IN LUKE 5, I PROBABLY WOULD NEED TO KNOW WHETHER OR
14 NOT THE BIBLE IS WRITTEN IN CHINESE OR ENGLISH; ISN'T THAT
15 CORRECT?

16 A. THAT'S CORRECT.

17 Q. WHAT HAPPENS IF I ACTUALLY SEARCH AGAINST, LET'S SAY, A
18 BIBLE THAT'S WRITTEN IN CHINESE BY ENGLISH? WHAT WOULD HAPPEN
19 IN THE TYPICAL SCENARIO INVOLVING A DATABASE QUERY?

20 A. IT WOULD PROBABLY RETURN NOTHING.

21 Q. ALL RIGHT.

22 A. IT WOULD BE DIFFERENT -- SO CHINESE IS A GREAT EXAMPLE.
23 IT'S A TOTALLY DIFFERENT CHARACTER SET THAN ENGLISH, WHICH IS
24 DIFFERENT THAN POTENTIALLY SEARCHING LATIN VERSUS ENGLISH.

25 IT WOULD RETURN NOTHING.

1 Q. RIGHT. SO CAN YOU GIVE ME JUST A LITTLE BIT ABOUT WHAT
2 EXACTLY, WHEN WE'RE STRUCTURING A COMPUTER QUERY, LIKE A SCRIPT
3 TO SEARCH AGAINST A DATABASE, WHAT EXACTLY ARE WE TELLING THE
4 COMPUTER TO DO IN THIS SPECIFIC EXAMPLE THAT YOU HAVE?

5 A. RIGHT. SO WE'RE, WE'RE BASICALLY TELLING THE COMPUTER TO
6 GO FIND THE INSTANCES WHERE, IN A PARTICULAR FIELD -- SO
7 COLUMN, ROW, HOWEVER THE DATA IS STRUCTURED -- IN A PARTICULAR
8 FIELD, FIND THE VALUE THAT WE'VE SUPPLIED.

9 NOW, IF WE WERE TO INPUT 146.71.8.79 INTO A QUERY THAT WAS
10 TARGETED AT THE LOG ON THE RIGHT, WE WOULD RETURN NOTHING.

11 SO NOT ONLY DO WE NEED TO KNOW THAT THE I.P. ADDRESS VALUE
12 IS CONTAINED WITHIN THE CLIENT IPS FIELD, WHICH WE POTENTIALLY
13 COULD GAIN FROM THE SCHEMA OF THE DATA, OR THE LIST OF FIELDS,
14 WE ALSO NEED TO KNOW WHAT TRANSFORMATIONS WE HAVE TO APPLY TO
15 THAT DATA, WHICH IS WHY IT'S IMPORTANT TO BE ABLE TO SEE WHAT'S
16 ACTUALLY INSIDE THE LOG ITSELF.

17 Q. SO I CAPTURED A NUANCE, I HEARD A NUANCE THERE AND I
18 WANTED TO MAKE SURE I UNDERSTAND. IS THERE A DIFFERENCE
19 BETWEEN THE SCHEMA OF A LOG VERSUS HOW THE VALUE IN THE SCHEMA
20 MAY BE EXPRESSED? IF THERE IS, CAN YOU PLEASE EXPLAIN THAT FOR
21 THE COURT AND THE AUDIENCE?

22 A. SURE THING.

23 SO SCHEMA IS THE STRUCTURE. SCHEMA IS THE FIELDS, THE
24 LIST OF AVAILABLE FIELDS, IN A GIVEN ENTRY. THE SCHEMA,
25 DEPENDING ON THE SYSTEM, MAY MEAN THAT ALL THOSE FIELDS HAVE TO

1 BE THERE.

2 OTHER SYSTEMS, LIKE WE'LL TALK ABOUT IN A MINUTE, MEAN
3 THAT NOT ALL OF THOSE FIELDS HAVE TO BE THERE, BUT THEY'RE
4 AVAILABLE. THERE ARE SLOTS FOR THEM WITHIN THE STRUCTURED
5 DATA.

6 AND GENERALLY SPEAKING, THE SCHEMA WILL DEFINE A DATA
7 TYPE, WHICH IS A BROAD TERM THAT BREAKS DOWN THE THINGS LIKE
8 NUMBER VERSUS TEXT, THAT SORT OF THING.

9 IN SOME MORE COMPLEX SYSTEMS, YOU CAN HAVE SUBSCHEMAS THAT
10 ARE PART OF A LARGER SCHEMA AS WELL.

11 Q. SO CAN I WRITE A PROPER QUERY WITHOUT KNOWING BOTH THE
12 SCHEMA AND HOW THE VALUES ARE STORED?

13 A. NO. YOU'D BE TAKING SHOTS IN THE DARK.

14 Q. CAN YOU EXPLAIN A LITTLE BIT WHY THAT IS?

15 A. SURE. SO AS I MENTIONED BEFORE, IF YOU DON'T KNOW HOW YOU
16 NEED TO TRANSFORM THE DATA, YOU'RE NOT GOING TO BE ABLE TO GET
17 THE QUERY THAT GIVES YOU THE RESULTS BACK THAT YOU WANT.

18 AND, IN FACT, IF YOU DON'T KNOW THE PROPER WAY TO
19 TRANSFORM THE DATA, YOU MAY GET BACK RESULTS THAT YOU DIDN'T
20 WANT, DEPENDING ON THE SYSTEM.

21 IT ENDS UP BEING LIKE LITERALLY TAKING SHOTS IN THE DARK
22 AND GUESS AND CHECK. YOU WOULD RUN THE QUERY, SEE WHAT YOU GET
23 BACK, LOOK TO SEE IF IT MAKES SENSE, AND THEN HAVE TO TAKE
24 ANOTHER STAB AT IT.

25 Q. I APOLOGIZE, MR. BOLES. CAN I TROUBLE YOU TO JUST PUT UP

1 ON TO THE SCREEN EXHIBIT NUMBER 75.

2 YOUR HONOR, EXHIBIT NUMBER 75 IS A CORRESPONDENCE BETWEEN
3 COUNSEL.

4 AND ALL I NEED IS REALLY THE TOP HALF RIGHT THERE.

5 MR. THOMPSON, IF YOU MAY GIVE ME A SEC HERE -- ACTUALLY,
6 I'LL ALLOW THE WITNESS TO READ IT.

7 (PAUSE IN PROCEEDINGS.)

8 BY MR. MAO:

9 Q. MR. THOMPSON, YOU UNDERSTAND THAT EXPERT REPORTS, OPENING
10 EXPERT REPORTS IN THIS CASE HAVE ALREADY BEEN EXCHANGED; IS
11 THAT CORRECT?

12 A. THAT IS MY UNDERSTANDING, YES.

13 Q. OKAY. DO YOU KNOW WHEN THAT WAS EXCHANGED?

14 A. I THINK IT WAS LESS THAN A WEEK AGO, BUT I'M NOT TOTALLY
15 SURE.

16 Q. THAT'S CORRECT.

17 OKAY. YOU SEE THE SEARCH THERE, SEARCH II, STEP 2?

18 A. YES.

19 Q. DO YOU KNOW WHAT WE WERE SEARCHING FOR THERE IN SEARCH II,
20 STEP 2?

21 A. YES. SO IN SEARCH II, STEP 2, WE WERE LOOKING FOR THE
22 LOGS THAT CONTAINED THE MAYBE_CHROME_INCOGNITO BIT AND THE LOGS
23 THAT CONTAINED THE IS_CHROME_INCOGNITO AND THE
24 IS_CHROME_NON_INCOGNITO BITS.

25 Q. RIGHT. AND YOU UNDERSTAND THERE'S A LOT OF DATA THAT IS

1 NOT GOING TO BE COMING BACK UNTIL MAY 20TH, 2022, RIGHT, WHICH
2 IS ALSO THE REBUTTAL REPORTS, WHEN THAT IS DUE; IS THAT
3 CORRECT?

4 A. SO I'M NOT SURE OF THE EXACT DATE, BUT I KNOW IT'S NOT
5 BEEN PRODUCED. I'VE BEEN TOLD AT SOME POINT WE'LL GET IT.

6 Q. SO IS IT TRUE THAT TYPICALLY IN THESE TYPE OF QUERIES, YOU
7 ALSO WANT TO ROUND BY WHICH, ONCE YOU GET THE DATA, YOU
8 ACTUALLY WANT TO BE ABLE TO TEST HOW THE DATA WAS OBTAINED?

9 A. YEAH. SO GETTING BACK TO MY DISCUSSION ABOUT TAKING SHOTS
10 IN THE DARK, PART OF THE ISSUE IS THAT YOU DO WANT TO VALIDATE,
11 YOU DO WANT TO DO WHAT'S SOMETIMES CALLED DEBUGGING, IN
12 COMPUTER SCIENCE PARLANCE, TO MAKE SURE THAT YOU ARE GETTING
13 THE DATA BACK THAT YOU EXPECT TO BE GETTING BACK, AND TO MAKE
14 SURE THAT YOU EXCLUDE THE THINGS YOU INTENDED TO EXCLUDE AND
15 INCLUDED THE THINGS THAT YOU INTENDED TO INCLUDE.

16 IT'S AN ITERATIVE PROCESS, WHICH IS ACTUALLY WHAT I
17 UNDERSTAND THE SPECIAL MASTER PROCESS TO HAVE BEEN, WHICH IS TO
18 CONTINUE TO REFINE.

19 AN ANALOGY THAT I FREQUENTLY USE WITH MY WIFE, WHO'S NOT
20 IN THIS FIELD, IS IT'S LIKE TAKING -- STARTING WITH A LARGER
21 CHISEL AND YOU SLOWLY MOVE TO A SMALLER CHISEL AS YOU LEARN
22 MORE ABOUT THE PROBLEM THAT YOU'RE SOLVING, THE PARAMETERS, AND
23 THE ASSUMPTIONS AND CONSTRAINTS.

24 Q. SO WOULD IT BE ACCURATE -- IT'S THE MOMENTUM, YOU KNOW.

25 IS IT ACCURATE TO SAY THAT PLAINTIFFS WOULD NOT BE ABLE TO

1 TEST THE DATA ONCE THEY RECEIVE THE DATA FOR THE INCOGNITO BITS
2 FOR THE FIRST TIME SOMETIME ON OR AROUND MAY 20TH?

3 A. THAT'S CORRECT, YES.

4 Q. BACK TO THE SLIDES. CAN WE GO TO THE NEXT SLIDE?

5 I BELIEVE ACTUALLY WE'RE MOVING ON TO YOUR THIRD TOPIC.

6 WHERE DID YOU GET THIS, THE CONTENTS FOR THIS SLIDE FROM?

7 A. SURE. SO THIS IS -- AND I APOLOGIZE IN ADVANCE TO THE
8 COURT IF I MESS UP THE LEGAL TERMINOLOGY FOR THIS -- BUT MY
9 UNDERSTANDING IS THIS IS THE OPPOSITION BRIEF TO THE ORDER TO
10 SHOW CAUSE.

11 AND THE DISCUSSION AROUND THIS IS, AS I MENTIONED BEFORE,
12 SOMETIMES THERE ARE OPTIONAL FIELDS WITHIN SCHEMAS THAT EXIST.
13 SO -- AND THE -- THIS HIGHLIGHTED STATEMENT HERE IS SAYING THAT
14 THE IS_CHROME_NON_INCOGNITO BIT IS INCLUDED IN THE GOOGLE WEB
15 SERVICES PROTOCOL BUFFER, OR GWS PROTO, A DATA FORMAT USED TO
16 SERIALIZE DATA. NOT EVERY LOG THAT USES THIS PROTO WILL
17 INCLUDE EVERY SINGLE FIELD, AND THAT'S CONSISTENT WITH THE WAY
18 THAT PROTOCOL BUFFERS WORK. THEY ALLOW FOR OPTIONAL INCLUSION
19 OF DATA.

20 BUT THE SECONDARY POINT IS THAT FOR ALL OF THE LOG
21 PROCESSES THAT UTILIZE THIS SCHEMA, THE GWS PROTO, IT IS
22 AVAILABLE, SO THEY COULD WRITE TO IT.

23 AND I THINK IT PROBABLY MAKES SENSE, ON THIS NEXT SLIDE,
24 TO DISCUSS A LITTLE BIT ABOUT PROTOCOL BUFFERS.

25 PROTOCOL BUFFERS IS AN OPEN SOURCE FRAMEWORK PUBLISHED BY

1 GOOGLE THAT IS FOR, THE TECHNICAL TERM IS SERIALIZING DATA, BUT
2 IT BASICALLY IS FOR STORING AND TRANSMITTING DATA.

3 AND AS WE HAVE HERE, HIGHLIGHTED HERE, PROTOCOL BUFFERS
4 ARE THE MOST COMMONLY USED DATA FORMAT AT GOOGLE, AND THAT WAS
5 REFERENCED ON THE PREVIOUS SLIDE AS WELL WITH THIS GWS LOG
6 ENTRY.

7 Q. CAN YOU MAYBE EXPLAIN FOR ME IN A MORE EVERY DAY KIND OF
8 ANALOGY WHAT EXACTLY A PROTOCOL BUFFER DOES AND HOW IT ACTUALLY
9 RELATES TO LOGS, WHICH WAS YOUR SECOND TOPIC?

10 A. SURE.

11 SO A PROTOCOL BUFFER IS FOR STORING THINGS. A PROTOCOL
12 BUFFER, OR PROTO ENTRY, IS FOR STORING THINGS.

13 SO ONE EXAMPLE THAT YOU COULD THINK OF -- AND THIS IS
14 ADMITTEDLY NOT A PERFECT EXAMPLE, BUT IT'S AN EXAMPLE -- IS IF
15 YOU HAVE A STREAM OF WATER AND YOU'RE LOOKING TO FILTER OUT
16 THINGS THAT ARE IN IT, SO MAYBE THERE ARE PRECIOUS MINERALS,
17 MAYBE THERE'S DEBRIS, MAYBE THERE ARE LARGE CHUNKS OF THINGS,
18 AND AS YOU APPLY YOUR FILTER, YOU TAKE THE THINGS THAT YOU
19 CAPTURE OUT OF THE FILTER AND YOU PUT THEM IN A SPECIAL BOX
20 THAT'S DESIGNED TO HOLD ALL OF THE THINGS THAT YOU CAPTURE OUT
21 OF THE WATER, AND THERE ARE DIFFERENT SLOTS IN THAT BOX FOR THE
22 THINGS THAT YOU CAPTURE, AND MAYBE YOUR FILTER IS ONLY LOOKING
23 FOR PRECIOUS METAL AND MAYBE YOU'RE NOT FILLING UP THE DEBRIS
24 SLOT, BUT THE DEBRIS SLOT IS THERE. YOU CAN TURN THE FILTER
25 SUCH THAT IT DOES POPULATE THE DEBRIS SLOT.

1 THAT'S KIND OF THE WAY TO THINK OF THIS. EACH ENTRY IS
2 EFFECTIVELY A COLLECTION OF THINGS THAT HAVE BEEN PULLED OUT OF
3 THE STREAM WITH SOME COMBINATION OF THEM POPULATED WITHIN THE
4 BOX.

5 Q. SO JUST REAL FAST, YOU TALK ABOUT PROTOCOL BUFFERS HERE.

6 WHEN WEB DEVELOPERS OR, YOU KNOW, PEOPLE DESIGNING
7 PROTOCOL BUFFERS ARE PUTTING IT TOGETHER, ARE THERE GENERALLY
8 DESIGN DOCUMENTS THAT WOULD BE RELATED TO WHATEVER YOU'VE PUT
9 TOGETHER FOR THE PROTOCOL BUFFER?

10 A. I WOULD EXPECT THERE TO BE.

11 Q. CAN WE PUT UP EXHIBIT 15 ON THE SCREEN.

12 MR. THOMPSON, HAVE YOU EVER SEEN THIS LETTER FROM
13 MR. ANSORGE DATED APRIL 1ST, 2022, WHICH IS EXHIBIT 15?

14 A. I BELIEVE I HAVE, YES.

15 Q. DO YOU SEE THAT THERE? CAN YOU READ THAT INTO THE RECORD,
16 THE COMMENT ON THE TOP?

17 A. SURE.

18 Q. SORRY. ON THE BOTTOM?

19 A. ON THE VERY BOTTOM IN YELLOW, "REPRESENTS IF AN ENTRY
20 COMES FROM A CHROME WEB BROWSER IN THE INCOGNITO MODE."

21 Q. WHEN THIS LETTER SAYS THAT "BELOW IS THE PROTO COMMENT IN
22 THE FIELD," WHAT EXACTLY DOES THAT ACTUALLY MEAN? CAN YOU GIVE
23 ME A TANGIBLE WAY THAT I CAN VISUALIZE WHAT THAT ACTUALLY
24 MEANS?

25 A. SURE. SO A WAY TO THINK ABOUT COMMENTS IS JUST LIKE

1 COMMENTS IN A WORD DOCUMENT OR AN EXCEL SHEET OR SOMETHING LIKE
2 THAT.

3 THE SAME IS TRUE FOR SOFTWARE DEVELOPERS, SOFTWARE
4 ENGINEERS. IT'S A WAY TO COMMUNICATE BETWEEN PEOPLE WHO ARE
5 WORKING TOGETHER, WITHOUT NECESSARILY PUTTING IT DIRECTLY INTO
6 THE CONTENT OF WHAT YOU'RE LOOKING AT.

7 AND SO THIS IS A COMMENT THAT IS, I BELIEVE IS --
8 SUPPOSEDLY EXISTS IN THE SCHEMA FILE THAT DEFINES THE THING
9 THAT CONTAINS THE IS_CHROME_INCOGNITO FIELD.

10 Q. HAVE YOU -- WOULD YOU EXPECT THAT THIS WOULD BE PRODUCED
11 IN SOME TYPE OF DOCUMENT, IF THERE'S A DOCUMENT SUITE FOR
12 PROTOCOL COMMENT, PROTOCOL BUFFER COMMENTS?

13 A. YEAH, IT -- I WOULD. I THINK IT'S A, IT'S A COMMENT,
14 RIGHT. IT'S A -- IT'S NON-EXECUTABLE. I WOULD EXPECT THERE TO
15 BE DOCUMENTATION ASSOCIATED WITH IT.

16 Q. AND YOU HAVE NOT YET SEEN THE UNDERLYING DOCUMENT THAT'S
17 ACTUALLY ASSOCIATED WITH WHATEVER IS REFERENCED IN THIS LETTER;
18 IS THAT CORRECT?

19 A. THAT'S CORRECT.

20 Q. OKAY. I'D LIKE TO MOVE ON TO, BACK TO THE PRESENTATION TO
21 THE SLIDES, AND GO TO THE NEXT SLIDE, PLEASE.

22 I'M JUST CURIOUS, YOU SEE YOU ALSO INCLUDED THIS "FIELD
23 DISCLOSURE." WHAT EXACTLY WERE YOU TRYING TO EXPLAIN HERE?

24 A. RIGHT. SO THIS IS -- I APOLOGIZE IT'S A LITTLE BIT SMALL,
25 IT'S TAKEN OUT OF AN EXCEL VIEW, BUT WHAT WE CAN SEE HERE,

1 HIGHLIGHTED QUICKLY, AND THEN WE CAN ZOOM OUT, IS THE PRESENCE
2 OF THE IS_CHROME_NON_INCOGNITO MODE FIELD.

3 AND THIS -- MY UNDERSTANDING IS THIS PRODUCTION WAS PART
4 OF THE SPECIAL MASTER PROCESS AND IT IS A LISTING OF THE FIELDS
5 THAT WERE CONTAINED WITHIN A SPECIFIC LOG, REGARDLESS OF
6 WHETHER THEY WERE USED IN THE LOG, BUT THEY WERE PRESENT IN THE
7 LOG.

8 AND THIS IS CONSISTENT WITH THE, THE LETTER THAT WE
9 HIGHLIGHTED EARLIER, THE OPPOSITION BRIEF THAT WE HIGHLIGHTED
10 EARLIER SAYING THAT THE IS_CHROME_NON_INCOGNITO FIELD IS
11 PRESENT IN THE NUMBER OF DIFFERENT LOG SCHEMAS.

12 Q. WHEN THIS SCHEMA WAS FIRST PROVIDED TO YOU IN NOVEMBER --
13 SORRY -- DECEMBER OF 2021, WAS THAT SPECIFIC FIELD, THE
14 IS_CHROME_NON_INCOGNITO MODE FIELD, IN THE SCHEMA?

15 A. FOR THIS LOG, NO, IT WAS NOT.

16 Q. OKAY. WHAT DOES THE FACT THAT IT APPEARS NOW TELL YOU
17 ABOUT THE NATURE OF WHERE THIS EXISTS IN TERMS OF WHAT YOU HAD
18 JUST TESTIFIED TO ABOUT PROTOCOL BUFFERS?

19 A. SO I THINK THE FACT THAT IT SHOWS UP IN THIS LOG, COMBINED
20 WITH THE REFERENCE TO THE GWS LOG ENTRY PROTO, TELLS ME THAT
21 IT'S POTENTIALLY IN A LOT OF PLACES, OR COULD BE USED IN A LOT
22 OF PLACES WITH MINIMAL EFFORT.

23 I'M NOT SAYING THAT IT'S NECESSARILY WRITTEN THERE, BUT IT
24 COULD BE BECAUSE THAT'S -- IT'S WITHIN THE SCHEMA THAT'S
25 AVAILABLE TO THE PROCESSES THAT ARE USING IT.

1 Q. I BELIEVE YOU WERE ACTUALLY A PERCIPIENT WITNESS TO THE
2 FIRST TIME IN WHICH I ACTUALLY SAW THIS FIELD IN A SCHEMA. CAN
3 YOU EXPLAIN A LITTLE BIT ABOUT HOW THAT ACTUALLY HAPPENED?

4 A. THAT'S CORRECT, YES. SO IT WAS DURING THE LIVE SEARCHES
5 FACILITATED BY SPECIAL MASTER BRUSH AND MR. SCHMIDT.

6 Q. SORRY. AND THE DATE FOR THAT WAS MARCH 4TH, WELL AFTER
7 DISCOVERY HAD CLOSED; IS THAT CORRECT?

8 MR. SCHAPIRO: OBJECTION TO LEADING AND THE
9 COMMENTARY.

10 THE WITNESS: UM --

11 THE COURT: GO AHEAD.

12 THE WITNESS: I DON'T REMEMBER THE EXACT DATE. I
13 REMEMBER IT WAS THE WEEK OF LIVE SEARCHES, WHICH WOULD HAVE
14 BEEN EARLY MARCH.

15 BY MR. MAO:

16 Q. OKAY. PLEASE.

17 A. THERE WAS A WEEK IN WHICH WE DID, I THINK, FIVE DAYS OF
18 KIND OF LIVE ZOOM CALLS WITH GOOGLE ENGINEERS AND VARIOUS LEGAL
19 TEAMS.

20 BUT IT WAS ACTUALLY A SEARCH THAT WAS RUN BY THE EXPERT
21 FOR THE CALHOUN PLAINTIFFS USING A TOOL CALLED A DREMEL, WHICH
22 IS AN INTERNAL TOOL, SPELLED LIKE THE TOOL YOU BUY AT HOME
23 DEPOT, THAT IS FOR QUERYING DATA IN A RELATIVELY EFFICIENT
24 MANNER IS MY UNDERSTANDING.

25 AND DURING THE QUERY, I BELIEVE IT WAS A SYNC LOG, A

1 CHROME SYNC LOG, IT SHOWED UP.

2 AND WE KIND OF COLLECTIVELY HAD A "WHAT IS THAT?" MOMENT.
3 "WHY IS THIS HERE?" MOMENT.

4 Q. MR. THOMPSON, YOU UNDERSTAND THAT DR. SADOWSKI -- WELL,
5 THERE'S -- YOU UNDERSTAND DR. SADOWSKI HAD TESTIFIED THAT THERE
6 WERE FIVE DIFFERENT IS_INCOGNITO AND NON_INCOGNITO LOGS; IS
7 THAT CORRECT?

8 A. I BELIEVE THAT'S CORRECT.

9 Q. WHEN YOU LOOKED AT THOSE LOGS, DID ANY OF THEM APPEAR TO
10 YOU TO BE A, QUOTE-UNQUOTE, SYNC LOG?

11 A. NO.

12 Q. AND WHAT YOU SAW THAT DAY ON MARCH 4TH, THAT WAS RUN --
13 THAT WAS A QUERY THAT WAS RUN AGAINST A SYNC LOG; IS THAT
14 CORRECT?

15 A. THAT'S CORRECT.

16 Q. SO DO YOU BELIEVE THAT, GIVEN THAT THERE WERE ONLY FIVE
17 LOGS THAT WERE IDENTIFIED BY DR. SADOWSKI, THAT THERE MAY BE
18 ACTUALLY MORE LOGS THAT CONTAIN THESE INCOGNITO BITS?

19 A. YEAH, I THINK WE DON'T KNOW. I THINK THAT WE'VE SEEN,
20 WE'VE SEEN THINGS THAT DON'T LINE UP.

21 Q. CAN WE GO ON TO THE NEXT SLIDE, PLEASE.

22 A. SO WITH ALL OF THAT SAID, AND I'VE ALLUDED TO THIS
23 EARLIER, BUT JUST TO KIND OF ROUND OUT THIS PORTION OF
24 DISCUSSION, WRITING TO THESE FIELDS, ONCE THEY ALREADY EXIST,
25 ESPECIALLY A FIELD AS SIMPLE AS TRUE/FALSE, IS REALLY AS SIMPLE

1 AS FLIPPING A LIGHT SWITCH. IT'S A VERY SIMPLE CODE CHANGE.
2 THE SCHEMA ALREADY EXISTED. THE CODE ALREADY EXISTED. IT'S A
3 MATTER OF EFFECTIVELY ENABLING THE FUNCTIONALITY.

4 Q. IF WE CAN MOVE ON TO I THINK WHAT MAY BE THE LAST SLIDE.

5 CAN YOU TELL US, THE COURT, THE SPECIAL MASTER ALSO, THE
6 AUDIENCE HERE, WHAT EXACTLY THAT MIGHT HAVE MEANT IN TERMS OF
7 PRESERVING DATA?

8 A. SURE. THIS IS MY POINT THREE, AND THE ABILITY TO FLAG
9 TRAFFIC, DETECT TRAFFIC THAT IS INCOGNITO, MAY BE INCOGNITO, IS
10 RELEVANT BECAUSE IT ALLOWS US TO REDUCE THE AMOUNT OF DATA THAT
11 NEEDS TO BE PRESERVED FOR THE PURPOSES OF THIS CASE.

12 SO, YOU KNOW, WHEN YOU LOOK AT THE BEGINNING, YOU SAY, OH,
13 THERE'S ALL THE DATA BECAUSE WE DON'T KNOW.

14 BUT WE ACTUALLY CAN TAKE SEVERAL STEPS TO REDUCE IT. IN
15 MY EARLIER SLIDES I TALKED ABOUT HOW ONE TRANSMISSION TO GOOGLE
16 WOULD RESULT IN POTENTIALLY MULTIPLE LOG ENTRIES BEING WRITTEN,
17 AND FOR THE PURPOSES OF THIS CASE, THOSE LOG ENTRIES MAY HAVE
18 NUMEROUS USES AT GOOGLE, BUT FOR THE PURPOSES OF THIS CASE, WE
19 REALLY DON'T NEED ALL OF THOSE. WE NEED TO DEDUPLICATE THE
20 DATA IN SOME WAY. SO THAT REDUCES THE DATA IN THE FIRST CUT.

21 WE ALSO DON'T NEED ALL OF THE FIELDS. THERE ARE NUMEROUS
22 FIELDS THAT ARE PRESENT. THERE'S ONLY A CERTAIN SUBSET OF
23 FIELDS THAT WE'RE LOOKING AT. SO THAT REDUCES IT FURTHER.

24 AND THEN IF YOU LAYER IN THE ABILITY TO DETECT INCOGNITO
25 TRAFFIC AND FLAG INCOGNITO TRAFFIC, YOU'RE ABLE TO IDENTIFY THE

1 TRAFFIC THAT REALLY NEEDS TO BE PRESERVED, AND ANY RELATED
2 TRAFFIC, SO RELATED ENTRIES LIKE ENCRYPTION KEYS OR POTENTIALLY
3 GAIA ENTRIES, THAT SORT OF THING RELATED TO CORE THINGS LATER
4 ON.

5 BUT IT'S A MUCH SMALLER SUBSET OF THE DATA. GOOGLE'S OWN
6 NUMBERS SAY THAT IT'S ABOUT 3 PERCENT OF CHROME TRAFFIC, AND
7 CHROME IS OBVIOUSLY NOT THE ENTIRE WORLD OF BROWSER TRAFFIC.

8 SO IT ALLOWS YOU TO BASICALLY REDUCE WHAT YOU WOULD NEED
9 TO PRESERVE FOR THE PURPOSES OF THIS CASE.

10 Q. OKAY. ALMOST THERE.

11 MR. THOMPSON, WERE YOU HERE IN THE ROOM WHEN YOU HEARD
12 MS. TREBICKA'S ARGUMENTS?

13 A. YES.

14 Q. YOU HEARD HER REFER TO SOMETHING CALLED THE X-CLIENT DATA
15 HEADER; ISN'T THAT CORRECT?

16 A. THAT'S CORRECT.

17 Q. OKAY. HERE WE'RE TALKING ABOUT THE INCOGNITO BITS; RIGHT?

18 A. THAT'S CORRECT.

19 Q. ARE THERE DIFFERENCES BETWEEN THOSE TWO DIFFERENT GROUPS
20 OF THINGS?

21 A. SURE. SO THE X-CLIENT DATA HEADER -- THE INCOGNITO
22 BITS -- IN COMPUTER SCIENCE, A BIT IS A 1 OR A 0, AND IN THE
23 INCOGNITO BITS, THESE ARE A TRUE OR A FALSE STATEMENT.

24 THOSE ARE SMALLER THAN THE X-CLIENT DATA HEADER. THE
25 X-CLIENT DATA HEADER IS A STRING OF VARIABLE LENGTH, BUT IN

1 BROWSER TRAFFIC, IT'S TENS OF CHARACTERS, IF NOT MORE. IT
2 VARIES A LITTLE BIT.

3 BUT IN ANY CASE, IT'S BIGGER THAN THE SINGLE BIT THAT WE
4 USE TO REPRESENT INCOGNITO, NON_INCOGNITO.

5 Q. WITH REGARD TO THE IS_CHROME_INCOGNITO BIT AND THE
6 IS_CHROME_NON_INCOGNITO BIT, HAVE YOU ACTUALLY SEEN THE CODE OR
7 THE ALGORITHM AS TO HOW THAT IS ACTUALLY DERIVED AS A TRUE OR A
8 FALSE?

9 A. NO, I HAVE NOT.

10 Q. OKAY. SO INsofar AS MS. TREBICKA'S REFERRING TO THE
11 X-CLIENT DATA HEADER, YOU ACTUALLY DO NOT HAVE ANY
12 DOCUMENTATION ON HOW THOSE THINGS ACTUALLY RELATE TO ONE
13 ANOTHER, DO YOU?

14 A. NO. THEY'RE -- NO.

15 MR. MAO: I HAVE NO FURTHER QUESTIONS FOR NOW.

16 THE COURT: THANK YOU.

17 MR. SCHAPIRO?

18 **CROSS-EXAMINATION**

19 BY MR. SCHAPIRO:

20 Q. GOOD AFTERNOON, MR. THOMPSON.

21 A. GOOD AFTERNOON.

22 Q. I NOTICE MR. MAO DIDN'T ASK YOU ANY QUESTIONS ABOUT
23 SEGMENTS OF A DECLARATION THAT YOU PUT IN IN SUPPORT OF THIS
24 HEARING IN WHICH YOU SAID THAT YOU HAD A WAY TO TRY AND WORK
25 BACKWARDS FROM MATERIAL THAT COULD BE PROVIDED TO YOU FROM

1 GOOGLE TO IDENTIFY CLASS MEMBERS.

2 DO YOU RECALL SUBMITTING THAT, THAT DECLARATION?

3 A. I DO RECALL THAT.

4 Q. SO I WANTED TO ASK YOU A LITTLE BIT ABOUT THAT.

5 A. SURE.

6 Q. THAT DECLARATION IN WHICH YOU DESIGNED WHAT YOU PURPORTED
7 TO, WHAT YOU PURPORTED TO BE A WAY OF DETERMINING MEMBERS OF
8 THE CLASS FROM INFORMATION THAT YOU COULD GATHER THROUGH
9 DISCOVERY, IT WAS BASED ON, AMONG OTHER THINGS, AN I.P. ADDRESS
10 AND A USER AGENT; CORRECT?

11 A. THOSE VALUES WERE INCLUDED IN THE PROCESS THAT I OUTLINED,
12 YES.

13 Q. AND, MR. THOMPSON, YOU'RE NOT STATING -- IT'S NOT YOUR
14 POSITION THAT AN I.P. ADDRESS IS UNIQUE TO ANY INDIVIDUAL
15 HUMAN, ARE YOU?

16 A. NO, I'M NOT TAKING THAT POSITION.

17 Q. AND YOU WOULD AGREE WITH ME THAT AN I.P. ADDRESS IS NOT
18 UNIQUE TO A PARTICULAR DEVICE, IS IT?

19 A. IT DEPENDS ON THE CIRCUMSTANCES, BUT GENERALLY NO.

20 Q. AND A USER AGENT -- NOW, THAT'S BASICALLY WHAT THE -- IS
21 IT FAIR TO, IN LAYMAN'S TERMS, SAY THAT'S WHAT THE COMPUTER IS
22 RUNNING AT THE TIME? FAIR SHORTHAND?

23 A. CLOSE, YEAH.

24 Q. ALL RIGHT. SO USER AGENTS OBVIOUSLY ARE NOT UNIQUE AS
25 WELL, RIGHT? I COULD BE RUNNING CHROME, THE LATEST VERSION OF

1 CHROME ON MY LAPTOP, SOMEONE ELSE COULD BE RUNNING THE SAME
2 VERSION OF CHROME ON HER LAPTOP; CORRECT?

3 A. SO I THINK THIS IS -- NOT QUITE. THIS IS WHERE I THINK
4 MY -- I SAID IT'S CLOSE FOR YOUR INITIAL CHARACTERIZATION OF
5 IT.

6 IT DEPENDS MORE THAN JUST THE VERSION OF CHROME. SO THERE
7 ARE SEVERAL SIGNALS THAT ARE LAYERED INTO THE USER AGENT, MORE
8 THAN JUST THE VERSION OF CHROME.

9 Q. SURE. BUT THE BASIC PRINCIPLE, USER AGENT IS NOT
10 NECESSARILY UNIQUE TO ANY ONE DEVICE; CORRECT?

11 A. THAT'S GENERALLY CORRECT, YES.

12 Q. IN FACT, YOU'VE WRITTEN SOME -- YOU WROTE A PAPER AT SOME
13 POINT ABOUT CELL PHONES, AND YOU AGREE THAT A SINGLE CELL PHONE
14 COULD HAVE MULTIPLE USER AGENTS; RIGHT?

15 A. CAN YOU EXPLAIN A LITTLE BIT? IN WHAT CONTEXT DO YOU MEAN
16 "MULTIPLE AGENTS"?

17 Q. SURE. WELL, LET'S SAY A BROWSER IS UPDATED ON MY CELL
18 PHONE. THE USER AGENT AFTER THE UPDATE IS GOING TO APPEAR
19 DIFFERENT THAN BEFORE; RIGHT?

20 A. YES.

21 Q. SAME THING WITH A LAPTOP; RIGHT? WHEN A BROWSER IS
22 UPDATED OR IF A LAPTOP IS RUNNING TWO DIFFERENT BROWSERS, I
23 MIGHT HAVE SAFARI, I MIGHT HAVE CHROME, IT COULD HAVE TWO
24 DIFFERENT USER AGENTS; RIGHT?

25 A. UM-HUM.

1 Q. AND IN DOING YOUR EXPERIMENT IN WHICH YOU SAID YOU WOULD,
2 IF YOU HAD THIS INFORMATION, YOU WOULD BE ABLE TO WORK
3 BACKWARDS AND IDENTIFY CLASS MEMBERS, YOU SHOWED SOME, SOME
4 EXAMPLES IN YOUR DECLARATION, OR YOUR REPORT; IS THAT RIGHT?

5 A. THAT'S CORRECT.

6 Q. AND IN THOSE, YOU USED CERTAIN I.P. ADDRESSES; CORRECT?

7 A. THAT'S CORRECT.

8 Q. AND THE I.P. ADDRESSES THAT YOU USED IN DOING THAT
9 EXPERIENCE -- EXCUSE ME -- THAT EXPERIMENT, THOSE WERE
10 SOMETHING THAT WERE CALLED IPV4 I.P. ADDRESSES; CORRECT?

11 A. I BELIEVE. I WOULD NEED TO LOOK AT THE EXHIBITS AGAIN
12 SPECIFICALLY.

13 Q. WELL, THERE ARE TWO DIFFERENT KINDS OF I.P. ADDRESSES;
14 RIGHT?

15 A. YES.

16 Q. IPV4 AND IPV6; IS THAT RIGHT?

17 A. THAT'S CORRECT.

18 Q. AND YOU'LL AGREE WITH ME THAT AN IPV4 ADDRESS HAS LESS
19 INFORMATION BUILT INTO IT AND IS, THEREFORE, LESS UNIQUE THAN
20 AN IPV6 ADDRESS; CORRECT?

21 A. YES, THEY ARE SHORTER, YES, THAT'S TRUE.

22 Q. AND IN DOING THIS, THIS EXPERIMENT THAT YOU DID, YOU
23 PULLED THE IPV4 ADDRESSES THAT YOU USED FROM A DEVICE USING AN
24 I.P. ADDRESS LOOKUP SERVICE; CORRECT?

25 A. THAT'S CORRECT.

1 Q. YOU'LL AGREE WITH ME ALSO THAT THERE ARE STATIC I.P.
2 ADDRESSES AND DYNAMIC I.P. ADDRESSES; RIGHT? SOME THAT CHANGE
3 MORE OFTEN, SOME THAT CHANGE LESS; CORRECT?

4 A. THAT'S TRUE, YES.

5 Q. AND WITH REGARD TO UPDATES TO BROWSERS THAT MIGHT CHANGE A
6 USER AGENT, ARE YOU AWARE THAT CHROME UPDATES TO A NEW VERSION
7 EVERY SIX WEEKS?

8 A. I'M NOT AWARE OF GOOGLE'S PUBLICATION SCHEDULE FOR CHROME.

9 Q. IT'S FAIR TO SAY THAT YOU'RE AWARE THAT CHROME UPDATES
10 WITH SOME REGULARITY?

11 A. I BELIEVE THAT GOOGLE PUSHES UPDATES TO CHROME WITH SOME
12 REGULARITY, THAT'S MY UNDERSTANDING, ALTHOUGH I DON'T KNOW WHAT
13 THE SCHEDULE IS.

14 Q. ALL RIGHT. SO THE GIST OF ALL THIS -- TELL ME IF YOU
15 DISAGREE WITH ANY OF THIS -- IS THAT AN I.P. ADDRESS COMBINED
16 WITH A USER AGENT CAN'T TELL YOU WHO AN INDIVIDUAL HUMAN BEING
17 USING THE COMPUTER IS; CORRECT?

18 A. I'M NOT SURE THAT'S TOTALLY ACCURATE.

19 Q. TELL ME HOW YOU COULD TAKE AN I.P. ADDRESS AND A USER
20 AGENT AND IDENTIFY A HUMAN BEING WHO IS USING THAT DEVICE.

21 A. SO I SUPPOSE THERE'S, THERE'S THE -- THERE'S THE
22 DIFFERENCE BETWEEN IDENTIFYING THE DEVICE AND IDENTIFYING THE
23 HUMAN, AND I BELIEVE WHAT I OUTLINED IS THE STEPS THAT, IN THE
24 PROOF OF CONCEPT, WERE IDENTIFYING THE DEVICE AND IDENTIFYING
25 THE TRAFFIC SPECIFICALLY.

1 SO THE ISSUE OF WHO WAS USING IT, I SUPPOSE, IS UP FOR A
2 DIFFERENT SORT OF DEBATE, BUT I DON'T THINK THAT I OFFERED ANY
3 OPINION ON THAT.

4 BUT IDENTIFYING THE TRAFFIC IS ABOUT NARROWING DOWN --
5 TAKING THE DATA THAT'S PRESENT AND COMBINING IT IN A WAY THAT
6 YOU CAN SUCCESSFULLY IDENTIFY THE TRAFFIC IN MULTIPLE LOGS, FOR
7 EXAMPLE.

8 SO ONE OF THE EXAMPLES THAT, THAT WE LOOK AT IS -- SO,
9 YES, CHROME DOES UPDATE. THERE ARE UPDATES APPLIED TO CHROME.

10 THE USER TYPICALLY HAS TO TAKE SOME INTERVENTION TO DO
11 THAT. SO I'M SURE YOU'VE USED CHROME AND YOU'LL SEE EVERY ONCE
12 IN A WHILE THERE WILL BE A THING UP IN THE CORNER WHERE IT'S
13 GREEN AND THEN IT GETS YELLOW AND THEN IT GETS RED IF YOU'VE
14 PUT OFF UPDATES FOR TOO LONG, AND IF YOU RESTART CHROME, IT'LL
15 UPDATE. BUT UNTIL YOU DO THAT, IT WON'T UPDATE EVEN IF IT'S
16 DOWNLOADED THE UPDATE. CHROME WON'T UPDATE, WON'T KICK YOU OUT
17 EVEN IF IT'S DOWNLOADING THE UPDATE.

18 SO ONE OF THE OTHER ELEMENTS THAT IS IMPORTANT TO INCLUDE
19 IS THE NOTION OF TIME, RIGHT? SO IF I'M LOOKING AT RECORDS
20 FROM SIX MONTHS AGO AND YOU'RE TELLING ME YOUR USER AGENT AND
21 I.P. ADDRESS IS SIX MONTHS OR SOMETHING AND YOU'RE SAYING IT'S
22 THE SAME AS SIX MONTHS AGO, WELL, NO, THAT'S NOT WHAT I'M
23 SAYING.

24 MY POINT IS THAT WITHIN THE CONFINES OF THE EXPERIMENT AND
25 THE DATA THAT WE HAVE ACCESS TO, THIS ILLUSTRATES THE CONCEPT.

1 Q. SO, MR. THOMPSON, THAT WAS A LONG ANSWER. I WANT TO
2 REPEAT MY QUESTION, WHICH I THINK WAS JUST A STRAIGHTFORWARD
3 ONE. YOU'RE NOT SAYING, IN THAT REPORT OR ON THE WITNESS STAND
4 TODAY, THAT YOU CAN TAKE AN I.P. ADDRESS AND A USER AGENT AND
5 DETERMINE WHAT HUMAN BEING WAS, WAS USING THE INTERNET JUST
6 FROM THOSE TWO ITEMS; CORRECT?

7 A. SO YOU'RE SAYING THE I.P. AND USER AGENT -- YOU'RE ASKING
8 ME WHETHER I THINK THAT THE I.P. AND USER AGENT IS TIED TO A
9 FLESH AND BLOOD PERSON?

10 Q. I'M ASKING IF YOU COULD -- YEAH, THAT SEEMS FAIR, YEAH.

11 A. YEAH, I DON'T THINK I'VE OFFERED THAT OPINION.

12 Q. AND, IN FACT, YOU'RE AWARE OF -- STRIKE THAT.

13 IF YOU HAVE A FAMILY --

14 A. UM-HUM.

15 Q. -- SHARING A COMPUTER, THE I.P. ADDRESS AND THE USER
16 AGENT, THEY'RE GOING TO BE IDENTICAL; RIGHT? SOMEONE GOES ON
17 THE COMPUTER IN THE KITCHEN AND SEARCHES FOR A RECIPE, YOU
18 CAN'T TELL FROM THE USER AGENT OR THE I.P. ADDRESS WHETHER THAT
19 WAS MOM, DAD, OR JUNIOR; RIGHT?

20 A. I CERTAINLY CAN.

21 Q. YOU CAN?

22 A. I CAN.

23 Q. TELL ME HOW.

24 A. WELL, SO I -- I DON'T KNOW YOUR FAMILY.

25 MY DAUGHTER HAS A KINDLE FIRE TABLET. MY WIFE HAS A SMALL

1 13 INCH MACBOOK. I HAVE A 15 INCH MACBOOK.

2 MY WIFE IS NOT GOOD ABOUT INSTALLING UPDATES. I'M GOOD
3 ABOUT INSTALLING UPDATES. MY DAUGHTER DOESN'T INSTALL UPDATES
4 BECAUSE SHE'S FOUR.

5 THOSE ARE ALL GOING TO HAVE DIFFERENT USER AGENTS. THEY
6 MAY HAVE THE SAME I.P., IT DEPENDS ON CIRCUMSTANCES.

7 Q. I APOLOGIZE IF MY QUESTION WAS UNCLEAR.

8 I'M TALKING ABOUT ONE COMPUTER, BECAUSE THERE ARE
9 FAMILIES, MINE INCLUDED IF I CAN VOUCH, THAT HAVE A COMPUTER IN
10 A ROOM THAT MIGHT BE THE FAMILY COMPUTER, AND WILL YOU DISAGREE
11 WITH ME THAT IF SOMEONE GOES AND SEARCHES FOR A RECIPE ON THE
12 COMPUTER IN THE KITCHEN, YOU CAN'T TELL WHETHER IT'S MOM, DAD,
13 OR JUNIOR?

14 A. I APOLOGIZE. I DID MISUNDERSTAND YOUR QUESTION.

15 THIS GETS BACK TO THE FLESH AND BLOOD, AND NO, I DON'T --
16 THAT'S NOT THE OPINION THAT I'VE OFFERED.

17 Q. AND, MR. THOMPSON, IN FACT, INCOGNITO MODE IS DESIGNED FOR
18 SITUATIONS IN WHICH PEOPLE ARE SHARING DEVICES, ISN'T IT?

19 MR. MAO: OBJECTION. OUTSIDE THE SCOPE OF THE EXPERT
20 IS TESTIFYING ABOUT, DESIGNATED TO TESTIFY FOR, AND LACKS
21 FOUNDATION.

22 MR. SCHAPIRO: WELL, LET ME WITHDRAW THAT QUESTION
23 AND LAY A FOUNDATION.

24 CAN WE PUT UP THE FIRST SLIDE THAT YOU SHOWED
25 MR. THOMPSON IN WHICH HE HAD THE SPLASH SCREEN FROM INCOGNITO.

1 Q. SO THIS IS -- MR. MAO ASKED YOU ABOUT THIS SPLASH SCREEN.
2 DO YOU RECALL THAT?

3 A. I DO.

4 Q. AND I'LL ASK YOU TO READ THE SENTENCE UNDERNEATH THE WORDS
5 "YOU'VE GONE INCOGNITO."

6 CAN YOU READ THOSE OUT LOUD, PLEASE?

7 A. SURE. "NOW YOU CAN BROWSE PRIVATELY, AND OTHER PEOPLE WHO
8 USE THIS DEVICE WON'T SEE YOUR ACTIVITY."

9 Q. IS IT FAIR TO SAY THAT ONE OF THE PARADIGMATIC USE CASES
10 FOR INCOGNITO IS PEOPLE WHO ARE SHARING A DEVICE, FOR EXAMPLE,
11 A SPOUSE WHO MIGHT NOT WANT -- OR A BOYFRIEND WHO MIGHT NOT
12 WANT HIS GIRLFRIEND TO SEE THAT HE WAS SEARCHING FOR AN
13 ENGAGEMENT RING?

14 MR. MAO: OBJECTION. CALLS FOR SPECULATION.

15 THE COURT: I'LL ALLOW IT.

16 GO AHEAD.

17 THE WITNESS: I CAN'T COMMENT ON THAT. I WASN'T
18 INVOLVED IN THE DESIGN DECISIONS OF WHAT WENT INTO CHROME OR
19 HOW PEOPLE NECESSARILY CHOOSE TO OPEN INCOGNITO.

20 BY MR. SCHAPIRO:

21 Q. WELL, MR. THOMPSON, YOU'VE USED CHROME; CORRECT?

22 A. UM-HUM, I HAVE.

23 Q. AND YOU'VE BEEN IN -- YOU TOLD US YOU GRADUATED FROM
24 COLLEGE MORE THAN TEN YEARS AGO AND YOU'VE WORKED IN COMPUTERS
25 IN ONE WAY OR ANOTHER SINCE THEN; RIGHT?

1 A. THAT'S CORRECT.

2 Q. AND YOU'RE TELLING ME YOU HAVE NO POSITION ON WHETHER
3 CHROME -- THAT A PARADIGMATIC USE CASE FOR CHROME IS TO MAKE
4 SURE THAT OTHER PEOPLE WHO USE THE SAME DEVICE DON'T SEE YOUR
5 ACTIVITY?

6 A. THAT'S WHAT I SAID.

7 WHAT I THINK THAT -- SO LET ME GIVE YOU AN EXAMPLE. MY
8 PRIMARY USE OF PRIVATE BROWSING MODE HAS TO DO WITH THERE ARE
9 VARIOUS ENTITIES THAT I DO CONSULTING SERVICES FOR, AND
10 SOMETIMES I HAVE ACCOUNTS AT DIFFERENT PLACES.

11 CERTAIN SERVICES DON'T COOPERATE WELL WITH SIGNING OUT AND
12 SIGNING BACK IN, OR IT'S ANNOYING, SO I'LL USE A PRIVATE
13 BROWSING MODE TO SIGN INTO SOMETHING NEW.

14 Q. I'M SORRY. DID YOU SAY YOU DO THAT SOMETIMES ON DIFFERENT
15 DEVICES?

16 A. NO, ON THE SAME DEVICE.

17 Q. ALL RIGHT. AND DO YOU DO THAT IN DIFFERENT LOCATIONS
18 SOMETIMES?

19 A. I SUPPOSE I COULD.

20 Q. AND IF YOU'RE IN A DIFFERENT LOCATION, YOUR PUBLIC I.P.
21 ADDRESS WOULD ALMOST CERTAINLY BE DIFFERENT; IS THAT CORRECT?

22 A. PROBABLY.

23 Q. AND IN THESE EXPERIMENTS THAT YOU DID AND THAT YOU -- FOR
24 WHICH YOU SUBMITTED A DECLARATION TO THIS COURT, YOU USED
25 CERTAIN, CERTAIN ID'S AS A PIECE OF YOUR EXPERIMENT; CORRECT?

1 A. I THINK THAT'S ACCURATE, YES.

2 Q. AND YOU KNEW WHO HAD GENERATED THOSE ID'S BECAUSE THESE
3 WERE ID'S THAT WERE GENERATED EITHER BY SOME OF PLAINTIFFS'
4 EXPERTS OR BY THE NAMED PLAINTIFFS THEMSELVES; IS THAT RIGHT?

5 A. I WOULD SAY I UNDERSTAND THE PARAMETERS UNDER WHICH THE
6 DATA WAS CAPTURED.

7 Q. AND YOU -- DID YOU UNDERSTAND THAT -- DID YOU HAVE
8 KNOWLEDGE OF WHETHER THE DATA -- WHEN THE DATA WAS CAPTURED, TO
9 USE YOUR PHRASE, THE USER WAS IN INCOGNITO MODE?

10 A. YES.

11 Q. SO BASICALLY WHAT YOUR EXPERIMENT SHOWED IS THAT SOMEONE
12 WHO YOU ALREADY KNEW WAS IN INCOGNITO MODE DIDN'T HAVE AN
13 X-CLIENT DATA HEADER IN GOOGLE'S LOGS; RIGHT?

14 A. UM, I'M NOT SURE I TOTALLY AGREE WITH THE SIMPLIFICATION.
15 CAN YOU MAYBE TRY THAT AGAIN?

16 Q. 3WELL, YOUR EXPERIMENT DIDN'T WORK BACKWARDS FINDING SOME
17 RANDOM ENTRY WITHOUT AN X-CLIENT DATA HEADER TO THEN ESTABLISH
18 THAT A PERSON WAS IN INCOGNITO; CORRECT?

19 A. THAT'S CORRECT.

20 Q. I THINK YOU SAID IN, IN THE -- IN YOUR DECLARATION THAT
21 YOU'RE FAMILIAR WITH THE, THE DOCUMENTS THAT HAVE BEEN
22 PRESENTED IN -- SHARED IN THIS CASE; IS THAT CORRECT?

23 A. CERTAIN, CERTAIN DOCUMENTS, YES.

24 Q. AND YOU'VE WORKED CLOSELY WITH THE PLAINTIFFS IN HELPING
25 TO ANALYZE SOME OF THE MATERIAL THAT'S BEEN PROVIDED?

1 A. GENERALLY, YES.

2 Q. AND I THINK YOU CITED IN YOUR, IN YOUR REPORT TO SOME
3 PORTIONS OF THE -- TO A DEPOSITION FROM A MAN NAMED
4 RORY MCCLELLAND IN SUPPORT OF YOUR THEORY THAT YOU MIGHT BE
5 ABLE TO SOMEHOW WORK BACKWARDS AND JOIN DATA TO HUMANS.

6 DO YOU RECALL THAT?

7 A. YES, I DO RECALL THAT.

8 Q. DID YOU READ THE MCCLELLAND DECLARATION WITH CARE?

9 A. YES.

10 Q. EXCUSE ME, THE MCCLELLAND DEPOSITION.

11 A. YES.

12 Q. SO YOU READ THE PORTION ON PAGE 319 OF HIS DEPOSITION IN
13 WHICH HE STATED, "WITH EACH NEW INCOGNITO" -- EXCUSE ME.

14 HE STATED "USERS TYPICALLY HAVE ONE OR TWO NEW PRIMARY
15 PROFILES, PERHAPS A PERSONAL ONE AND A WORK ONE AND THEN,
16 DEPENDING UPON HOW FREQUENTLY AND IF THEY USE INCOGNITO, THEY
17 MAY HAVE MULTIPLE ORPHANED INCOGNITO SESSION.

18 "WITH EACH NEW INCOGNITO SESSION, THERE IS A NEW PROFILE."

19 DO YOU RECALL READING THAT IN THE MCCLELLAND DEPOSITION?

20 A. I DON'T HAVE IT COMMITTED TO MEMORY. I'D BE HAPPY TO READ
21 IT AGAIN IF YOU WANTED TO PUT IT IN FRONT OF ME.

22 Q. IN YOUR EXPERIMENT, DID YOU REACH ANY CONCLUSION THAT IS
23 CONTRARY TO THE STATEMENT FROM MR. MCCLELLAND THAT WITH EACH
24 NEW INCOGNITO SESSION, THERE'S A NEW PROFILE?

25 MR. MAO: OBJECTION. THE WITNESS ASKED TO BE ABLE TO

1 READ THE RECORD IF YOU'RE GOING TO ASK HIM A QUESTION ABOUT
2 THAT RECORD.

3 THE COURT: THAT WAS A YES OR NO QUESTION AS I
4 UNDERSTAND IT.

5 BY MR. SCHAPIRO:

6 Q. YOU MAY ANSWER.

7 A. I'M SORRY. CAN YOU STATE IT AGAIN?

8 Q. YES. IN THE EXPERIMENT THAT YOU DID --

9 A. UM-HUM.

10 Q. -- THAT YOU SUBMITTED TO THIS COURT, DID YOU REACH ANY
11 CONCLUSION THAT WOULD CAUSE YOU TO DISAGREE WITH THE STATEMENT
12 FROM MR. MCCLELLAND THAT WITH EACH NEW INCOGNITO SESSION, THERE
13 WAS A NEW PROFILE?

14 A. I'M NOT GOING TO COMMENT ON THE -- ON HIS STATEMENT,
15 WHETHER I AGREE OR DISAGREE WITHOUT KIND OF SEEING IT AND
16 HAVING MORE CONTEXT AROUND IT.

17 WE DIDN'T DO A WHOLE LOT OF ANALYSIS OF THE NOTION OF A
18 PROFILE, THOUGH. THAT WASN'T REALLY PART OF THE EXPERIMENT AND
19 I DON'T THINK I OFFERED ANY OPINIONS ON THE NOTION OF PROFILES.

20 Q. WELL, LET ME ASK YOU ABOUT SOMETHING THAT MR. MCCLELLAND
21 SAID ON PAGE 25 OF HIS DEPOSITION. HE SAID, "WHEN YOU GO" --

22 THE COURT: EXCUSE ME, MR. SCHAPIRO. YOU'RE
23 REFERRING TO THE MCCLELLAND DEPO AS AN EXHIBIT TO
24 MR. THOMPSON'S DECLARATION. BUT THE PAGES YOU'RE REFERRING TO
25 ARE NOT THE PAGES THAT ARE INCLUDED AS AN EXHIBIT, AT LEAST NOT

1 IN MY VERSION.

2 MR. SCHAPIRO: WE WOULD BE HAPPY TO SUBMIT THESE
3 AFTERWARDS. I'M USING THESE TO IMPEACH HIM, AND IF HE SAYS HE
4 DIDN'T REMEMBER ANYTHING ABOUT IT, THAT'S OKAY. I'M USING IT
5 AS A JUMPING OFF POINT. BUT HE DID TESTIFY THAT HE HAD READ
6 ALL THE RELEVANT PAPERS AND HE RELIED ON THIS DEPOSITION.

7 THE COURT: HE DID TESTIFY THAT HE READ THE
8 DEPOSITION. I'M JUST -- I DON'T HAVE THE PAGES.

9 MR. SCHAPIRO: THAT'S OUR OVERSIGHT, YOUR HONOR. AS
10 LONG AS IT'S NOT IMPROPER PROCEDURALLY, I'LL STILL ASK HIM THE
11 QUESTIONS AND THEN WE CAN TRY AND SUBMIT THE FULL DEPOSITION.

12 WE ONLY RECEIVED THEIR EXHIBITS, AS THEY DID OURS, LATE
13 LAST NIGHT, AND I APOLOGIZE FOR NOT NOTING THAT THE ENTIRE
14 DEPOSITION WAS AN EXHIBIT.

15 MR. MAO: YOUR HONOR, I APOLOGIZE, BUT THE PROCEDURAL
16 PROBLEM IS THAT THE WITNESS DID ASK FOR A COPY SO THAT HE CAN
17 SEE WHAT MR. SCHAPIRO IS ASKING HIM ABOUT.

18 HE'S ASKING HIM ABOUT THE CONTEXT ABOUT THE PORTION OF THE
19 DEPOSITION THAT IS BEING -- IT JUST SEEMS PROCEDURALLY UNFAIR,
20 WHICH WAS MR. SCHAPIRO'S SUGGESTION THAT THIS BE PROCEDURALLY
21 FAIR.

22 THE COURT: I'LL LET YOU RESTATE YOUR QUESTION,
23 MR. SCHAPIRO.

24 MR. SCHAPIRO: SURE.

25 Q. DO YOU DISAGREE WITH THE FOLLOWING PROPOSITION -- AND I

1 DON'T EVEN NEED TO TIE IT TO A DEPOSITION -- DO YOU DISAGREE
2 WITH THIS: THAT WHEN A PERSON GOES INTO INCOGNITO, THAT PERSON
3 PRESENTS TO THE WEB SERVER, BE THAT GOOGLE OR OTHERWISE, AS A
4 NEW USER, A CLEAN SLATE USER, AND THUS IS NOT ASSOCIATED WITH
5 THE REGULAR DAY-TO-DAY BROWSING SO THAT THE ACTIVITY UNDERTAKEN
6 WITHIN THAT INCOGNITO SESSION IS ISOLATED AND SEGMENTED FROM
7 THE PERSON'S PRIMARY CHROME PROFILE?

8 DO YOU DISAGREE WITH THAT?

9 A. SO I THINK THAT -- THE CHROME PROFILE BIT I WANT TO STAY
10 AWAY FROM BECAUSE, AGAIN, I JUST NEED MORE CONTEXT FOR WHAT
11 YOU'RE TALKING ABOUT WITH CHROME PROFILES.

12 CAN YOU SAY THE BEGINNING PART AGAIN? I APOLOGIZE.

13 Q. SURE. MAYBE I CAN REPHRASE IT. WHEN YOU GO INTO
14 INCOGNITO MODE, DO YOU PRESENT TO THE WEB SERVER, WHETHER IT'S
15 GOOGLE OR OTHERWISE, AS A NEW USER WITH A CLEAN SLATE?

16 A. ARE YOU REFERRING TO -- WHEN YOU SAY WHEN YOU GO INTO
17 INCOGNITO MODE, CAN YOU EXPLAIN WHAT STEPS ARE WE TALKING
18 ABOUT, LIKE WHAT ACTIONS ARE TAKEN?

19 Q. YOU HAVE A CHROME BROWSER OPEN AND YOU SELECT OPEN A NEW
20 INCOGNITO WINDOW AND YOU GO SEARCH FOR SOMETHING.

21 A. SO IN THIS HYPOTHETICAL, DO WE HAVE OTHER INCOGNITO TABS
22 OR WINDOWS OPEN?

23 Q. NO.

24 A. OKAY. SO YOU HAVE A SINGLE OR A REGULAR INCOGNITO MODE
25 WINDOW OR TAB?

1 Q. YEAH.

2 A. AND YOU HAVE OPENED A NEW INCOGNITO MODE THAT -- WITH NO
3 OTHER INCOGNITO WINDOWS OR TABS OPEN? IS THAT ACCURATE?

4 Q. THAT'S ACCURATE.

5 A. SO THAT'S THE SITUATION YOU'RE TALKING ABOUT?

6 Q. YEAH.

7 A. OKAY. CAN YOU SAY THE NEXT BIT NOW THAT WE'VE ESTABLISHED
8 THAT.

9 Q. SURE. YOU GO INTO INCOGNITO MODE, AS WE'VE JUST AGREED
10 YOU WOULD.

11 DO YOU DISAGREE THAT YOU PRESENT TO THE WEB SERVER, OR YOU
12 APPEAR TO THE WEB SERVER, BE IT GOOGLE OR OTHERWISE, AS A NEW
13 USER, A CLEAN SLATE USER?

14 A. I THINK THAT YOU PRESENT WITH NO COOKIES AT THAT TIME.

15 SO I THINK THAT THE MECHANISMS THAT USE -- IF YOU SHOW UP
16 TO A WEBSITE, THEY'LL GIVE YOU A NEW COOKIE.

17 Q. I WANT TO ASK YOU ANOTHER QUESTION ABOUT MR. MCCLELLAND'S
18 DEPOSITION. APOLOGIES IF THIS ISN'T IN THE PART THAT GOES
19 TO -- THAT IS WITH THE COURT.

20 I DON'T KNOW. IS PAGE 74?

21 MS. TREBICKA: WE'RE CHECKING.

22 MR. SCHAPIRO: OKAY. WHETHER THAT'S PART OF THE
23 EXHIBIT.

24 Q. WHEN YOU STUDIED MR. MCCLELLAND'S DEPOSITION TO HELP YOU
25 PREPARE YOUR DECLARATION, DID YOU FIND ANYTHING TO DISAGREE

1 WITH FROM THE FOLLOWING TESTIMONY:

2 "PROFILES ARE NEVER JOINED, SO IT JUST LOOKS LIKE ANOTHER
3 USER IN THE WEB SERVER'S EYES AND EVERY TIME THE USER COMES
4 BACK IN A NEW INCOGNITO SESSION, A NEW PROFILE IS CREATED AND,
5 AGAIN, NEVER JOINED, SO THAT SEPARATION OCCURS BOTH FROM THE
6 PRIMARY SESSION, BUT ALSO ACROSS DIFFERENT DISTINCT INCOGNITO
7 SESSIONS"?

8 MR. MAO: OBJECTION TO HEARSAY.

9 THE COURT: I'M GOING TO SUSTAIN THE OBJECTION AT
10 THIS POINT AS TO READING FROM THE DEPOSITION TESTIMONY THAT THE
11 WITNESS HAS ASKED FOR.

12 BEFORE YOU MOVED YOUR QUESTIONS OFF OF, AWAY FROM THE
13 DEPOSITION.

14 BUT TO QUIZ HIM ON THE DEPOSITION TESTIMONY, I'LL SUSTAIN
15 THAT OBJECTION.

16 MR. SCHAPIRO: THAT'S FINE, YOUR HONOR. I'LL ASK IT
17 IN A GENERIC WAY.

18 DO YOU AGREE WITH THE PROPOSITION THAT -- DO YOU DISAGREE
19 WITH THE PROPOSITION THAT GOOGLE NEVER JOINS A PROFILE WITH
20 INCOGNITO ACTIVITY TO AN IDENTIFIABLE PROFILE?

21 A. I -- I DO FOR -- YEAH, I DO.

22 Q. SO YOU AGREE OR DISAGREE?

23 A. I DISAGREE. DID -- SORRY. SAY IT AGAIN, BECAUSE I WANT
24 TO MAKE SURE I UNDERSTAND WHICH -- WHICH IS AGREEING AND WHICH
25 IS DISAGREEING.

1 Q. GOOGLE NEVER JOINS PROFILES? I'LL GIVE YOU THE SHORTHAND.

2 A. I DISAGREE WITH THAT.

3 Q. AND WHAT EVIDENCE HAVE YOU SEEN THAT ESTABLISHES THAT
4 GOOGLE JOINS PROFILES?

5 A. SO I THINK THAT THERE'S A COUPLE THINGS THAT I DISAGREE
6 WITH IN THAT STATEMENT.

7 ONE, YOU SAID "NEVER," WHICH IS AN ABSOLUTE WHICH I THINK
8 IS NOT SOMETHING THAT I'M COMFORTABLE WITH.

9 SECOND IS THAT WE'VE ESTABLISHED THAT, THAT THERE ARE
10 LINKAGES THAT EXIST WITHIN, AGAIN, THE ANALYTICS UID'S, THE
11 PPID'S, THOSE ARE VERY STRAIGHTFORWARD LINKAGES THAT EXIST
12 WHERE ONE COULD COME FROM INCOGNITO, ONE COULD COME FROM
13 REGULAR, AND THEY EXIST.

14 I THINK THAT ASKING ME ABOUT -- YOU ASKED ME TO GIVE YOU
15 AN ABSOLUTE, AND WE'VE BEEN ASKING FOR MORE DATA. I'M NOT IN A
16 POSITION TO ESTABLISH AN ABSOLUTE WITHOUT MORE DATA.

17 Q. I UNDERSTAND. SO YOU DON'T WANT TO TAKE AN ABSOLUTE
18 POSITION.

19 LET ME ASK YOU ABOUT SOMETHING A LITTLE MORE NARROW.

20 MR. MAO SHOWED YOU A SLIDE, I CAN'T REMEMBER, IT WAS MAYBE
21 THREE OR FOUR SLIDES IN, THAT HAD THREE COLUMNS AND A RED BOX
22 AROUND THE COLUMN IN THE MIDDLE.

23 DO YOU REMEMBER THAT ONE?

24 A. THAT'S CORRECT.

25 Q. AND GOING ACROSS IN A ROW, THOSE THREE COLUMNS, YOU HAD

1 THE TERM PSEUDONYMOUS ID, OR IDENTIFIED -- PSEUDONYMOUS
2 SOMETHING -- THERE WE GO. PSEUDONYMOUS ID, PSEUDONYMOUS ID,
3 PSEUDONYMOUS ID; CORRECT?

4 A. YES.

5 Q. IT'S NOT YOUR POSITION, IS IT, THAT THE PSEUDONYMOUS ID IN
6 COLUMN 1 IS GOING TO HAVE THE SAME VALUE AS THE PSEUDONYMOUS ID
7 IN THE SECOND COLUMN, AND THE SAME WITH THE THIRD? OR IS IT?

8 A. IN WHAT CONTEXT? SO WHAT SCENARIO?

9 I MEAN, I THINK -- AND I APOLOGIZE, THIS IS NOT TRYING TO
10 ARGUE, BUT THIS IS ALL -- AND I'M SURE, AS YOUR TEAM KNOWS,
11 THIS IS ALL VERY COMPLICATED, SO THE PARAMETERS OF THE QUESTION
12 MATTER. RIGHT?

13 Q. WELL, YOUR SLIDE HERE -- I GUESS I'M GOING TO ASK YOU HOW
14 YOU USED IT.

15 YOUR SLIDE HERE IS CALLED "JOINING DATA"?

16 A. UM-HUM.

17 Q. AND MAYBE I MISUNDERSTOOD THE SLIDE, BUT IT LOOKED TO ME
18 AS IF YOU WERE SAYING YOU CAN TRACK PSEUDONYMOUS ID'S ACROSS
19 FROM A P LOG -- THAT IS, AUTHENTICATED DATE -- TO A B LOG, TO
20 ANALYTICS LOGS.

21 AND I JUST WANTED TO UNDERSTAND, ARE YOU, IN WHATEVER IT
22 IS YOU WERE TRYING TO GET ACROSS IN THIS SLIDE, ARE YOU
23 SUGGESTING THAT THE PSEUDONYMOUS ID REMAINS THE SAME ACROSS
24 THESE -- THE ROW?

25 A. I STILL DON'T UNDERSTAND THE, THE -- I MEAN, THE

1 PARAMETERS MATTER. SO IF YOU PICKED RANDOM ENTRIES, WOULD THEY
2 BE THE SAME ACROSS? NOT NECESSARILY. IT'S LIKE PICKING RANDOM
3 EXCEL ROWS.

4 CAN YOU EXPLAIN THE PARAMETERS? I NEED TO UNDERSTAND THE
5 PARAMETERS OF THE SITUATION WHERE YOU'RE ASKING ME THAT
6 QUESTION.

7 Q. WELL, WHAT DOES "PSEUDONYMOUS" MEAN IN YOUR EXPERIENCE AS
8 AN EXPERT?

9 A. SO MY UNDERSTANDING OF PSEUDONYMOUS IS NOT QUITE
10 ANONYMOUS. SO IT'S AN IDENTIFIER THAT, IN THIS CONTEXT, IS NOT
11 DIRECTLY ASSOCIATED WITH A GAIA ACCOUNT.

12 Q. CAN YOU DESCRIBE FOR ME A SITUATION IN WHICH YOU BELIEVE
13 THAT THE PSEUDONYMOUS IDENTIFIER IN THESE THREE COLUMNS WOULD
14 BE IDENTICAL?

15 A. SO YOU'RE ASKING FOR A HYPOTHETICAL, A COMPLEX --

16 Q. YOU'RE AN EXPERT.

17 A. SURE. BUT I WANT TO COUCH THIS WITH IT'S A HYPOTHETICAL,
18 AND WE HAVE LIMITED TIME, SO I'M GOING TO TRY TO GIVE AN
19 EXAMPLE.

20 BUT, AGAIN, WE'VE ASKED FOR MORE DATA, ASKED FOR MORE
21 INSIGHT, SO THIS IS A SIMPLE EXAMPLE.

22 SO ONE WOULD BE YOU ARE BROWSING IN INCOGNITO AND YOU SHOW
23 UP -- SORRY.

24 SO YOUR QUESTION WAS THE PSEUDONYMOUS ID'S APPEAR IN BOTH?

25 Q. YES, SIR.

1 A. SO MY UNDERSTANDING OF THE INCOGNITO TRAFFIC IS THAT THE,
2 OR THE WAY THAT THE LOGGING INFRASTRUCTURE WORKS IS THAT WHEN
3 YOU HAVE LOGGED OUT -- SO YOU'VE NOT LOGGED IN OR OPENED A NEW
4 CHROME SESSION, CHROME INCOGNITO SESSION -- YOUR DATA, AS I
5 TESTIFIED EARLIER, IS GOING INTO THE B LOGS, BISCOTTI LOGS.

6 HOWEVER, IF YOU SIGN IN DURING THAT SESSION, YOU CAN END
7 UP IN THE P LOGS WHERE YOU HAVE, NOW YOU HAVE -- YOU'VE SIGNED
8 IN.

9 AND THOSE, THOSE -- AND THE PSEUDONYMOUS ID'S, THE ID'S
10 THAT ARE FROM THE B LOGS, CAN THEN BE ENCRYPTED WITH THE
11 P LOGS.

12 Q. AND YOU'RE AWARE THAT THE CLASS IN THIS CASE INCLUDES ONLY
13 USERS WHO WERE NOT SIGNED IN; CORRECT?

14 A. SO I'M NOT GOING TO TESTIFY ON THE IN'S AND OUT'S OF THE
15 SPECIFICS OF THE CLASS. I'M GOING TO TESTIFY ABOUT THE TESTING
16 THAT I DID AND THE IDENTIFICATION OF THE DATA.

17 AND YOU ASKED ME FOR AN EXAMPLE, AND THAT IS A SIMPLE
18 EXAMPLE TO ILLUSTRATE KIND OF WHAT I'M TALKING ABOUT ON THAT
19 SPECIFIC ROW.

20 THERE ARE OTHER WAYS TO LINK THESE COLUMNS, BUT ON THAT
21 SPECIFIC ROW, THAT'S A SIMPLE EXAMPLE.

22 Q. MR. THOMPSON, MR. MAO ASKED YOU SOME QUESTIONS ABOUT LOGS.
23 DO YOU REMEMBER THAT?

24 A. I REMEMBER WE TALKED ABOUT LOGS, YES.

25 Q. AND YOU SAID, YOU KNOW, IF YOU'VE GOT A BIT LIKE THE ONE

1 WE'RE TALKING ABOUT, IT'S AS SIMPLE AS FLIPPING A SWITCH TO ADD
2 IT TO A LOG'S INFRASTRUCTURE.

3 DO YOU REMEMBER THAT?

4 A. I THINK THERE'S A SLIDE WITH THAT, YES.

5 Q. YEAH, IT HAD A LIGHT SWITCH ON IT.

6 SO IN, IN YOUR TIME AS A SELF-EMPLOYED COLLEGE GRADUATE,
7 HOW MANY LOGS HAVE YOU WORKED WITH THAT HAD A SHARED PROTO?

8 A. CAN YOU EXPLAIN THAT? HOW MANY LOGS? HOW WOULD I
9 QUANTIFY A LOG?

10 Q. WELL, YOU GUYS ARE -- STRIKE YOU GUYS. I APOLOGIZE.

11 YOU'VE BEEN ASKING HERE FOR THE PRODUCTION OF CERTAIN
12 LOGS, SO WHATEVER TERM YOU'RE USING TO DESCRIBE THE LOGS THAT
13 YOU'RE SEEKING FROM GOOGLE.

14 A. ALL RIGHT. SO ARE YOU ASKING ABOUT HOW OFTEN HAVE I
15 WORKED WITH SHARED SCHEMAS GENERALLY?

16 Q. YES, SIR.

17 A. I'VE LOST COUNT.

18 Q. AND HAVE YOU EVER -- CAN YOU LIST FOR ME THE TIMES IN
19 WHICH YOU'VE WORKED ON A SYSTEM IN WHICH HUNDREDS OF DIFFERENT
20 LOGS MANAGED BY DOZENS OF DIFFERENT TEAMS ASSOCIATED WITH
21 DOZENS OF DIFFERENT PRODUCTS BASED IN MULTIPLE DIFFERENT
22 LOCATIONS SHARED PROTOS?

23 A. SO THAT'S A VERY SPECIFIC SCENARIO.

24 WHAT I'LL SAY IS THAT I CAN DESCRIBE SCENARIOS -- AND THIS
25 IS IN VARIOUS CONSULTANCIES THAT I WORK WITH NOW WHERE THERE

1 ARE DISTRIBUTED TEAMS SHARING INFORMATION, SHARING SCHEMAS,
2 WORKING WITH VARIOUS DIFFERENT SOURCE CODE TECHNOLOGIES THAT
3 MAKE DATA AVAILABLE TO EACH OTHER.

4 Q. I'M SORRY. I LOST THE SECOND HALF OF THAT.

5 A. THERE ARE -- MAYBE I'LL JUST TRY TO REANSWER BECAUSE I'M
6 NOT SURE WHERE YOU LOST ME.

7 Q. THANKS.

8 A. SO I CAN TELL YOU IN MY VARIOUS ROLES AND THE PROJECTS
9 THAT I'VE WORKED ON, IT IS NOT UNCOMMON TO HAVE DISTRIBUTED
10 TEAMS IN VARIOUS TIME ZONES, VARIOUS AREAS, THAT ARE BOTH
11 SHARING RESOURCES, SHARING SOURCE CODE, SHARING SCHEMAS,
12 WRITING TO SIMILAR LOGS, WHETHER THEY ARE TEXT LOGS OR DATABASE
13 DRIVEN LOGS OR POTENTIALLY PROTO LOGS, COMMUNICATING BETWEEN
14 SYSTEMS USING THE SHARED SCHEMAS AND SCHEMAS THAT NEED TO BE
15 AGREED UPON.

16 AND, IN FACT, THE NOTION OF INHERITANCE, WHICH IS, BROADLY
17 SPEAKING, THE SHARED SCHEMA IN SOFTWARE ENGINEERING PARLANCE,
18 THAT IS VERY COMMON.

19 Q. I BELIEVE YOU TOLD US EARLIER THAT YOU'VE BEEN MADE PRIVY
20 TO DOCUMENTS THAT HAVE -- THAT HAVE BEEN PRODUCED IN THIS
21 LITIGATION; IS THAT CORRECT?

22 A. YES.

23 Q. AND SO WERE YOU AWARE THAT IN JUNE OF 2021 GOOGLE PRODUCED
24 A DOCUMENT IDENTIFYING THE IS_CHROME_NON -- STRIKE THAT.

25 WHEN DID YOU BECOME AWARE THAT IN JUNE OF 2021 GOOGLE

1 PRODUCED A DOCUMENT THAT IDENTIFIED THE IS_CHROME_NON_INCOGNITO
2 BIT?

3 A. SO YOU'RE ASKING ME WHEN I BECAME AWARE THAT GOOGLE
4 PRODUCED THE DOCUMENT?

5 Q. YES, SIR.

6 A. CAN I SEE THE DOCUMENT YOU'RE TALKING ABOUT?

7 MR. MAO: MR. SCHAPIRO --

8 MR. SCHAPIRO: THIS WILL TAKE A MOMENT.

9 (PAUSE IN PROCEEDINGS.)

10 BY MR. SCHAPIRO:

11 Q. WHILE WE'RE PULLING UP THAT DOCUMENT, I'LL ASK YOU ABOUT A
12 FEW OTHERS, AND IF YOU CAN JUST TELL ME IF YOU'RE AWARE OF THEM
13 OR NOT, AND IF WE NEED TO SHOW THEM TO YOU, WE WILL.

14 WHEN, IF EVER, DID YOU BECOME AWARE THAT IN JUNE OF 2021
15 GOOGLE PRODUCED A DOCUMENT IDENTIFYING WHAT WE'RE CALLING HERE
16 THE PROJECT THAT LED TO THE MAYBE_CHROME_INCOGNITO BIT AND
17 IDENTIFYING MANDY LIU AS A PERSON WORKING ON IT?

18 A. I WOULD NEED TO SEE THE DOCUMENT.

19 Q. DO YOU HAVE ANY RECOLLECTION OF SEEING SUCH A DOCUMENT?

20 A. I'VE SEEN -- I'VE SEEN MANDY LIU'S NAME AND I'VE SEEN
21 REFERENCES TO WHAT WE'RE CALLING THE PROJECT, BUT I CAN'T TELL
22 YOU -- I DON'T RECALL WHEN CERTAIN DOCUMENTS WERE --

23 Q. AND, MR. THOMPSON, I THINK THE POSITION THAT YOU'RE TAKING
24 HERE AND THAT YOUR COUNSEL IS TAKING IS THAT THE
25 IS_CHROME_NON_INCOGNITO MODE IS IMPORTANT FOR YOUR WORK; IS

1 THAT RIGHT?

2 A. I THINK IT'S -- YEAH, I THINK WE'VE IDENTIFIED THAT IT IS
3 RELEVANT AND USEFUL.

4 Q. AND DO YOU REMEMBER WHEN YOU FIRST LEARNED ABOUT IT?

5 A. I DON'T RECALL.

6 Q. SO I'M GOING TO SHOW YOU, THIS IS GOING TO BE OUR
7 EXHIBIT A --

8 IT'S TAB 2 IN YOUR BINDER, YOUR HONOR.

9 IT'S TAB 2 IN THE BINDERS WE SHARED WITH YOU GUYS.

10 IT'S TAB 2. I'VE GOT IT MARKED LIKE THIS, YOUR HONOR,
11 BECAUSE I'M PULLING IT HERE.

12 SO I DON'T THINK THIS IS --

13 (DISCUSSION OFF THE RECORD BETWEEN DEFENSE COUNSEL.)

14 MR. SCHAPIRO: ALL RIGHT. I SEE IT.

15 Q. SO I'M GOING TO SHOW YOU WHAT --

16 MAY I APPROACH THE WITNESS, YOUR HONOR?

17 THE COURT: YES, YOU MAY.

18 BY MR. SCHAPIRO:

19 Q. -- WHAT WE'RE CALLING OUR EXHIBIT A (HANDING) .

20 A. THANK YOU.

21 Q. I'M GOING TO ASK YOU IF YOU REMEMBER ROUGHLY, IT CAN BE
22 THIS YEAR, LAST YEAR, WHEN YOU FIRST SAW THAT DOCUMENT, WHICH I
23 WILL REPRESENT WAS PRODUCED TO PLAINTIFFS ON JUNE 18TH, 2021.

24 A. DO YOU MIND IF I TAKE A SECOND?

25 Q. PLEASE DO.

1 THE COURT: MR. SCHAPIRO, DO YOU WANT TO IDENTIFY
2 THAT BY BATES NUMBER? CAN YOU DO THAT?

3 MR. SCHAPIRO: YEAH. CAN WE -- YOU CAN SHOUT IT.
4 THIS IS YOUR MOMENT IN THE SPOTLIGHT.

5 (LAUGHTER.)

6 MR. FORTENBERY: YOUR HONOR, IT'S GOOGLE BROWN
7 00176433.

8 THE COURT: THANK YOU.

9 MR. FORTENBERY: THANK YOU.

10 BY MR. SCHAPIRO:

11 Q. HAVE YOU HAD A CHANCE TO LOOK AT IT?

12 A. I HAVE, YES. THANK YOU.

13 Q. AND AT THE BACK, THAT DOCUMENT IDENTIFIES THE
14 IS_CHROME_NON_INCOGNITO MODE.

15 DO YOU SEE THAT?

16 A. YES, I SEE.

17 Q. AND DO YOU RECALL WHEN YOU WERE FIRST MADE AWARE OF THAT
18 DOCUMENT AS ONE OF PLAINTIFFS' EXPERTS?

19 A. SO I DO NOT. I RECALL SEEING IT THIS WEEK, BUT I DON'T
20 RECALL THE FIRST TIME I SAW IT.

21 Q. SO WERE YOU INVOLVED, AS AN EXPERT, IN ANY OF THE BRIEFING
22 THAT PLAINTIFFS PREPARED ABOUT THE X-CLIENT DATA HEADER?

23 A. WHICH BRIEFING IS THIS?

24 Q. BRIEFING IN JULY OF 2021.

25 A. I DON'T RECALL.

1 Q. AND SO IF YOU DON'T RECALL, I ASSUME YOU ALSO DON'T RECALL
2 WHETHER THIS DOCUMENT OR THE DOCUMENTS IDENTIFYING MANDY LIU
3 WERE ACTUALLY CITED IN YOUR BRIEFS IN JULY OF 2021, BECAUSE YOU
4 DON'T KNOW IF YOU WORKED ON THAT BRIEF?

5 A. YEAH, I DON'T RECALL.

6 Q. WOULD X-CLIENT DATA HEADER BE A TOPIC AS TO WHICH YOU'D BE
7 INVOLVED IN THE BRIEFING AS ONE OF THE PLAINTIFFS' EXPERTS?

8 A. POTENTIALLY. I --

9 Q. GO AHEAD.

10 A. NO, I -- PART OF MY ROLE IS ANSWERING QUESTIONS, AND
11 X-CLIENT DATA HEADER HAS BEEN A TOPIC THAT'S DISCUSSED.

12 BUT I CAN'T -- I DON'T RECALL THE SPECIFICS OF THAT
13 BRIEFING.

14 Q. SO JUST TO SAVE TIME, I'M GOING TO ASSUME THAT, AT LEAST
15 AS YOU SIT HERE TODAY, BUT TELL ME IF I'M WRONG -- OR I'LL JUST
16 ASK YOU, DO YOU REMEMBER SEEING ANY DOCUMENTS IN SEPTEMBER --
17 IN SEPTEMBER, OCTOBER, NOVEMBER OF LAST YEAR, JUST LAST FALL,
18 SUCH AS THE DESIGN DOCUMENTS UNDERLYING THE
19 MAYBE_CHROME_INCOGNITO BIT?

20 A. I DON'T RECALL.

21 MR. SCHAPIRO: I THINK THAT'S ALL I HAVE, YOUR HONOR.

22 THE COURT: THANK YOU. MR. MAO?

23 MR. SCHAPIRO: OH, IS THAT ALL I HAVE?

24 HANG ON.

25 (DISCUSSION OFF THE RECORD BETWEEN DEFENSE COUNSEL.)

1 BY MR. SCHAPIRO:

2 Q. JUST A HANDFUL OF QUESTIONS PROVIDED BY THE TEAM.

3 YOU MENTIONED THAT YOU LOOKED AT RELEVANT DOCUMENTS IN
4 PREPARING YOUR REPORT.

5 HAVE YOU TAKEN A LOOK AT ALL AT DR. SADOWSKI'S TESTIMONY
6 IN THIS CASE?

7 A. I HAVE REVIEWED IT, YES.

8 Q. AND SHE TESTIFIED THAT THE IS_CHROME_NON_INCOGNITO BIT IS
9 BASED ON THE ABSENCE OF THE X-CLIENT DATA HEADER; CORRECT?

10 A. AGAIN, I WOULD LIKE A SPECIFIC -- I'D LIKE TO REVIEW IT IF
11 YOU'RE TALKING ABOUT SOMETHING SPECIFIC.

12 BUT I DO REMEMBER THAT TOPIC.

13 Q. YOU REMEMBER THAT TOPIC CAME UP AT LEAST. AND DO YOU
14 DISAGREE THAT THE IS_CHROME_NON_INCOGNITO IS BASED ON THE
15 ABSENCE OF X-CLIENT DATA HEADER?

16 A. I ACTUALLY HAVE NOT SEEN SOURCE CODE OR ALGORITHM FOR THE
17 BIT, SO I CAN'T REALLY COMMENT ON THAT.

18 Q. SO YOU DON'T KNOW ONE WAY OR THE OTHER?

19 A. I DON'T KNOW FOR SURE.

20 Q. WHEN YOU SAY YOU DON'T KNOW FOR SURE, DO YOU MEAN YOU HAVE
21 AN INKLING?

22 A. AS SOMEONE WHO'S AN ENGINEER AND WE'RE TALKING ABOUT AN
23 ALGORITHM, I WOULD LIKE TO UNDERSTAND, IF YOU'RE GOING TO ASK
24 ME, UNDER OATH, WHAT'S INVOLVED, RIGHT, SO I'D LIKE TO SEE THE
25 SPECIFICS OF HOW IT'S CALCULATED TO COMMENT YES OR NO TO ANSWER

1 YOUR QUESTION.

2 MR. SCHAPIRO: THANKS. NOTHING FURTHER.

3 THE COURT: THANK YOU, MR. SCHAPIRO.

4 BRIEF REDIRECT, MR. MAO?

5 MR. MAO: YES, BRIEF. THANK YOU, YOUR HONOR.

6 I'M SO SORRY. IS IT OKAY IF I HAVE THIS OFF?

7 THE COURT: YES.

8 MR. MAO: THANK YOU.

9 **REDIRECT EXAMINATION**

10 BY MR. MAO:

11 Q. MR. THOMPSON, WITH REGARD TO I.P. ADDRESSES, IPV6
12 ADDRESSES DO INDIVIDUALLY IDENTIFY DEVICES; IS THAT CORRECT?

13 A. SO THE ISSUING SCHEMA, OR ISSUING SYSTEM FOR IPV6
14 ADDRESSES IS DIFFERENT THAN FOR IPV4. I BELIEVE MR. SCHAPIRO
15 SAID THEY'RE LONGER, WHICH IS TRUE, AND IPV6'S, YES, USUALLY DO
16 UNIQUELY IDENTIFY A DEVICE. THEY CAN BE USED TO UNIQUELY
17 IDENTIFY A DEVICE.

18 Q. AND EVEN IN THE SAME HOUSEHOLD, PEOPLE WITH DIFFERENT
19 DEVICES WOULD HAVE DIFFERENT IPV6 ADDRESSES; ISN'T THAT
20 CORRECT?

21 A. THAT'S CORRECT, BECAUSE OF THE WAY THAT THEY'RE ISSUED,
22 YES.

23 Q. OKAY. AND WITHIN YOUR HOUSEHOLD, DO YOU THINK THAT EACH
24 OF THE MEMBERS OF YOUR HOUSEHOLD KNOW WHICH DEVICES ACTUALLY
25 BELONG TO THEM?

1 A. YES.

2 Q. IF WE COULD PUT BACK UP THE "JOINING ABILITY" SLIDE, I
3 THINK THAT'S WHAT IT'S CALLED. OH, YES, THE "JOINING DATA"
4 SLIDE.

5 WE'RE LOOKING AT PSEUDONYMOUS ID'S, LET'S SAY INSTEAD OF
6 LOOKING TOWARD THE LEFT OF THIS PAGE, WE LOOK AT THE RIGHT OF
7 THIS PAGE, B LOGS AND ANALYTICS LOGS.

8 WOULD PPID'S AND UID'S BE A TYPE OF POTENTIALLY
9 PSEUDONYMOUS ID?

10 A. NO. THEY WOULD FALL IN THE LAST COLUMN.

11 Q. OKAY. DO THIRD PARTY --

12 A. THE LAST ROW -- EXCUSE ME -- THE LAST ROW.

13 Q. DO THIRD PARTY AUTHENTICATED ID'S APPEAR IN B LOGS?

14 A. WE HAVE SEEN LOGS THAT ARE KEYED BY THE SAME KEY THAT WAS
15 KEYED IN B LOG THAT CONTAIN THIRD PARTY ID'S YES.

16 Q. RIGHT. AND WOULD P LOGS OBTAIN THIRD PARTY AUTHENTICATED
17 ID'S?

18 A. THE SAME ANSWER, YES.

19 Q. SO PRESUMABLY IF YOU LOG IN, IN YOUR HYPOTHETICAL, TO A
20 THIRD PARTY WEBSITE, YOU CAN JOIN THE PROFILES AND THE DATA
21 ACROSS THOSE DIFFERENT SESSIONS; ISN'T THAT CORRECT?

22 A. YOU WOULD HAVE RECORDS THAT EXISTED IN BOTH WORLDS THAT
23 HAD THE SAME IDENTIFIERS.

24 Q. WHEN YOU SAY "KEY," RIGHT, WHEN YOU WERE LOOKING TO TRY TO
25 ASSESS THIS DATA, AS WE HAVE PREVIOUSLY HEARD YOU SAY, IT

1 MATTERS IN TERMS OF THE FORMAT IN WHICH EACH OF THESE -- IN
2 WHICH EACH OF THESE ID'S ARE ACTUALLY STORED; ISN'T THAT
3 CORRECT?

4 A. THAT'S CORRECT.

5 Q. IN ORDER FOR US TO FIND THOSE ID'S, YOU WOULD NEED TO KNOW
6 HOW THEY'RE STORED; ISN'T THAT CORRECT?

7 A. THAT'S CORRECT.

8 Q. MR. SCHAPIRO HAD REFERRED YOU TO WHAT WAS AN EXHIBIT
9 NUMBER 2.

10 CAN WE PUT THAT BACK UP?

11 THE COURT: SO I THINK, JUST TO BE CLEAR, IT'S
12 EXHIBIT A AT TAB 2.

13 IS THAT RIGHT?

14 MR. SCHAPIRO: YES, IT'S OUR EXHIBIT A.

15 THE COURT: IT'S THEIR EXHIBIT A.

16 MR. MAO: OH, SORRY.

17 THE COURT: BUT IT IS TAB 2 IN THE EXHIBIT BINDER.

18 MR. MAO: MAY I JUST MAKE THAT PART OF THE RECORD AS
19 EXHIBIT NUMBER 191? IS THAT OKAY? BECAUSE WE HAVE A --

20 THE COURT: YOU MEAN YOU'RE USING PLAINTIFF -- YOU'RE
21 USING NUMBERS AND THE DEFENDANTS ARE USING LETTERS.

22 MR. MAO: YEAH, OKAY.

23 THE COURT: SO IT IS DEFENDANT'S EXHIBIT A.

24 MR. SCHAPIRO: I THINK WE ALREADY LABELED IT.

25 MR. MAO: OKAY. SO FOR US, IT WOULD BE EXHIBIT

1 NUMBER 90, IF WE COULD PULL THAT FROM PLAINTIFFS' SIDE.

2 I'M SORRY, YOUR HONOR. I'M TRYING TO MAKE SURE WE'RE
3 TALKING ABOUT THE SAME DOCUMENT.

4 Q. WOULD YOU MIND LOOKING AT EXHIBIT NUMBER 90 JUST THERE ON
5 THE SCREEN? I JUST WANT TO MAKE SURE.

6 THAT DOES APPEAR TO BE THE SAME DOCUMENT. IS THAT SHOWING
7 UP ON YOUR SIDE OF THE SCREEN?

8 A. YES, I'VE GOT IT, AND THE SECTION LOOKS THE SAME.

9 Q. CAN YOU DO ME A FAVOR? YOU SEE ABOUT TWO ROWS DOWN,
10 THERE'S A STATEMENT FROM MR. PEARSON UP TOP UP IN THE MIDDLE
11 THERE?

12 A. YES.

13 Q. WHAT DOES THAT SAY? CAN YOU READ THAT INTO THE RECORD,
14 PLEASE?

15 A. THIS SAYS, "MARK PEARSON, FYI: FOR CHROME USERS, IT'S
16 TECHNICALLY POSSIBLE ON THE SEARCH SIDE TO DISTINGUISH BETWEEN
17 INCOGNITO AND NON-INCOGNITO SESSIONS ENTIRELY INDEPENDENTLY
18 FROM THE COOKIE STATE. IT HAS TO DO WITH WHAT OTHER HEADERS
19 CHROME SENDS TO GOOGLE. AS SUCH, SOME SERVER-SIDE METRICS
20 (E.G. METRICS IN [REDACTED]) CAN BE CALCULATED SLICED BY INCOGNITO
21 STATUS FOR CHROME."

22 SHOULD I KEEP GOING?

23 Q. NO.

24 CAN WE ALSO GO TO THE BOTTOM OF THIS DOCUMENT. CAN YOU
25 HIGHLIGHT NUMBER 2 FOR MR. PEARSON?

1 CAN YOU READ THAT INTO THE RECORD, PLEASE?

2 A. SURE THING. "REGARDING PEOPLE WHO DO THIS, I SUGGEST
3 SEARCHING FOR 'X-CLIENT-DATA' IN INTERNAL CODE SEARCH AND
4 LOOKING FOR PAGES THAT INCLUDE THE MENTION OF INCOGNITO. THE
5 LAST TIME I SEARCHED FOR X-CLIENT-DATA, I FOUND A FEW MENTIONS
6 THAT SEEMED TO BE USING THIS FOR SNIFFING OUT INCOGNITO USERS."

7 Q. OKAY. SO MY QUESTION TO YOU IS, WHEN YOU'RE LOOKING AT
8 THIS SECOND PARAGRAPH HERE, RIGHT, WOULD YOU HAVE KNOWN WHETHER
9 OR NOT THE DATA IN WHICH MR. PEARSON IS REFERRING TO, WHERE
10 THEY ACTUALLY SIT IN TERMS OF A SCHEMA OR A LOG?

11 A. NO.

12 Q. LOOKING AT THIS, MR. THOMPSON, WOULD YOU KNOW THE FORMAT
13 BY WHICH THE DATA HE'S REFERRING TO IS ACTUALLY STORED?

14 A. NO.

15 Q. LOOKING AT THIS, MR. THOMPSON, WOULD YOU KNOW HOW TO
16 STRUCTURE A QUERY TO SEARCH AGAINST THE GOOGLE DATA IN ORDER TO
17 FIND WHAT MR. PEARSON IS REFERRING TO?

18 A. NO.

19 Q. OKAY. LET'S GO BACK UP TO THE TOP OF THAT PAGE AGAIN.

20 IF WE ASSUME THAT MR. MARK PEARSON IS A GOOGLE EMPLOYEE,
21 AM I RIGHT IN SAYING THAT WHEN I READ THIS PARAGRAPH, IT
22 SUGGESTS TO ME THAT MR. PEARSON IS ACKNOWLEDGING THAT INCOGNITO
23 AND NON-INCOGNITO SESSIONS COULD BE JOINED?

24 MR. SCHAPIRO: OBJECTION TO THE FORM OF THE QUESTION.

25 THE WITNESS: I'M SORRY. THIS IS --

1 THE COURT: HOLD ON JUST A SECOND, MR. THOMPSON.

2 MR. MAO: THAT SAME PARAGRAPH RIGHT THERE.

3 THE COURT: WHY DON'T YOU REPHRASE THAT? NOW YOU'RE
4 ASKING HIM WHETHER --

5 MR. MAO: SURE. LET ME BRING IT BACK A LITTLE BIT.

6 Q. LOOKING AT THAT PARAGRAPH, MR. PEARSON IS SAYING THAT
7 GOOGLE CLEARLY TRACKS INCOGNITO USERS IN TERMS OF THEIR
8 INCOGNITO USAGE; ISN'T THAT CORRECT?

9 A. SPECIFICALLY WITHIN THE NOTE -- LET'S SEE. SO, YEAH, HE
10 SAYS THAT -- I DO SEE WHAT -- I DO SEE WHERE HE SAYS THAT
11 PEOPLE MIGHT BE DOING IT IN THE LOGS, LOGS ANALYSIS CODE.

12 MR. MAO: THANK YOU, YOUR HONOR.

13 THANK YOU, MR. THOMPSON.

14 MR. SCHAPIRO: ONE QUESTION, YOUR HONOR.

15 THE COURT: ONE QUESTION, MR. SCHAPIRO.

16 **RECROSS-EXAMINATION**

17 BY MR. SCHAPIRO:

18 Q. MR. THOMPSON, AFTER YOU FIRST SAW THAT -- TWO QUESTIONS.
19 SORRY.

20 MR. MAO SUGGESTED THAT THERE WAS SOME FOLLOW-UP
21 INFORMATION YOU MIGHT NEED TO FULLY UNDERSTAND THAT DOCUMENT.

22 DO YOU RECALL HIM SAYING COULD YOU DETERMINE THE SCHEMA,
23 OR WHATEVER IT MIGHT BE?

24 A. I DO RECALL THAT, YES.

25 Q. SO AFTER YOU FIRST SAW THAT DOCUMENT, WHICH WAS PRODUCED

1 TO THE PLAINTIFFS LAST SUMMER, WHAT DID YOU DO? DID YOU ASK
2 FOR THOSE THINGS?

3 A. SO, AGAIN, I DON'T RECALL WHEN I FIRST SAW THIS. I KNOW
4 THAT WHEN I REVIEWED IT AGAIN THIS WEEK, WHICH I DON'T REMEMBER
5 WHEN I FIRST SAW IT, THERE IS -- IT IS UNCLEAR WHERE THIS DATA
6 IS BEING STORED, WOULD LIVE, OR HOW IT WOULD BE FORMATTED.

7 MR. SCHAPIRO: THAT'S ALL. THANK YOU.

8 THE COURT: THANK YOU.

9 THE WITNESS: THANK YOU.

10 THE COURT: YOU MAY STEP DOWN, MR. THOMPSON.

11 MR. SCHAPIRO: YOUR HONOR, ANY CHANCE FOR A FIVE
12 MINUTE --

13 THE COURT: YEAH. WE HAD TALKED ABOUT TAKING A 20
14 MINUTE BREAK AND RESUMING.

15 MR. BOIES, WHAT -- HOW MUCH DO PLAINTIFFS HAVE LEFT?

16 MR. BOIES: I WOULD ESTIMATE, YOUR HONOR, PROBABLY
17 45, 55 MINUTES.

18 THE COURT: AND IS THAT ARGUMENT? IS THAT --

19 MR. BOIES: THAT'S NOT WITNESS TESTIMONY. IT IS
20 PRESENTATION, ARGUMENT AND EXHIBITS AND MATERIALS.

21 THE COURT: ALL RIGHT.

22 MR. BOIES: AND PROFFERS.

23 THE COURT: ALL RIGHT. LET'S TAKE OUR 20 MINUTE
24 BREAK, AND I'M GOING TO REMIND THE PARTIES OF THE TIME
25 ESTIMATES THAT WE DISCUSSED LAST WEEK. AND WE'VE NOW BEEN

1 GOING TWO FULL HOURS, AND OBVIOUSLY SOME OF THAT WAS IN
2 CROSS-EXAMINATION, BUT WE NEED TO MOVE THIS ALONG PERHAPS MORE
3 QUICKLY.

4 AND THAT'LL BE AS FOR BOTH SIDE. ALL RIGHT?

5 MR. BOIES: THANK YOU, YOUR HONOR.

6 THE COURT: ALL RIGHT. WE'LL TAKE 20 MINUTES. THANK
7 YOU.

8 (RECESS FROM 12:36 P.M. UNTIL 1:01 P.M.)

9 THE CLERK: REMAIN SEATED AND COME TO ORDER. COURT
10 IS BACK IN SESSION.

11 THE COURT: NOT WITHOUT DEFENSE COUNSEL, IT'S NOT.

12 THE CLERK: OH, THEY WERE HERE A MINUTE AGO.

13 MR. MAO: YOUR HONOR, IS IT OKAY IF I GET SOME WATER?

14 THE COURT: OF COURSE.

15 MR. MAO: THANK YOU.

16 (PAUSE IN PROCEEDINGS.)

17 THE COURT: ALL RIGHT.

18 MR. BOIES.

19 MR. BOIES: THANK YOU, YOUR HONOR.

20 MR. SCHAPIRO: YOUR --

21 THE COURT: EXCUSE ME? NO?

22 MR. BOIES, YOU'RE ON.

23 MR. BOIES: THANK YOU, YOUR HONOR.

24 LET ME, JUST AS A HOUSEKEEPING MATTER, OFFER THE EXHIBITS
25 THAT WE'VE MENTIONED, BUT I THINK MAY NOT HAVE BEEN OFFERED.

1 EXHIBITS 15, 19, 20, 75, 87, AND 88, AND DEFENDANT'S
2 EXHIBIT A.

3 THE COURT: I'M SORRY. READ THOSE AGAIN, PLEASE.
4 15, 19?

5 MR. BOIES: PLAINTIFFS' EXHIBITS 15, 19, 20, 87, 88,
6 75, AND DEFENDANT'S EXHIBIT A.

7 THE COURT: ALL RIGHT. THOSE ARE OFFERED.
8 ANY OBJECTION?

9 MR. SCHAPIRO: NO OBJECTION, YOUR HONOR.

10 THE COURT: ALL RIGHT. THOSE WILL BE ADMITTED.

11 (PLAINTIFFS' EXHIBITS 15, 19, 20, 75, 87, 88, AND
12 DEFENDANT'S A WERE ADMITTED IN EVIDENCE.)

13 THE COURT: THANK YOU, MR. BOIES. PLEASE PROCEED.

14 MR. BOIES: THANK YOU, YOUR HONOR.

15 THE COURT: MINDFUL OF THE TIME.

16 MR. BOIES: MINDFUL OF THE TIME. I'LL TRY TO GO
17 FASTER.

18 THE COURT: THAT DOESN'T MEAN TALK FASTER.

19 MR. BOIES: I KNOW. I WILL TRY TO RESIST THAT.

20 THE COURT: THANK YOU.

21 MR. BOIES: LET ME BEGIN WITH GOING THROUGH THE LIST
22 OF THE POINTS THAT WE MADE THAT WE THINK REPRESENT DISCOVERY
23 LAPSES ON GOOGLE'S PART.

24 THE COURT: UM-HUM.

25 MR. BOIES: AND FIRST, AND IF YOU WOULD PUT UP

1 CHART 6, OR CHART A, CHART A, AND THIS HAS TO DO WITH THEIR
2 FAILING TO IDENTIFY RELEVANT PEOPLE.

3 AND THE FIRST SET THAT THEY GAVE US WAS FEBRUARY 4TH,
4 2021, IN RESPONSE TO OUR RFP 11 AND 12.

5 AND WHAT COUNSEL IN THE OPENING SAID WAS THEY DIDN'T KNOW
6 AT THAT TIME THAT LIAO, LEUNG, LIU, AND FIARD AND THE WHOLE
7 PRIVATE BROWSING AREA WAS RELEVANT.

8 WE THINK THERE ARE A NUMBER OF THINGS INCONSISTENT IN
9 THAT, YOUR HONOR.

10 BUT IN ANY EVENT, PLAINTIFFS' INTERROGATORY NUMBER 4 THAT
11 WE SERVED ON FEBRUARY 26TH, 2021, IN 4C ASKED THEM TO IDENTIFY
12 ALL OF THE PEOPLE THAT WERE KNOWLEDGEABLE ABOUT, AND I'LL READ
13 THIS, QUOTE, "GOOGLE'S COLLECTION OF AND USE OF DATA IN
14 CONNECTION WITH USERS' ACTIVITY WHILE IN A PRIVATE BROWSING
15 MODE, INCLUDING WITH RESPECT TO GOOGLE COOKIES, GOOGLE
16 ANALYTICS, GOOGLE AD MANAGER, G STATIC, APPROVED PIXELS, AND
17 ANY GOOGLE PRODUCTS OR SERVICES THAT COLLECT AND USE SUCH
18 DATA."

19 THERE COULD NOT HAVE BEEN ANY DOUBT, AS OF FEBRUARY 26TH,
20 2021, THAT THESE FIELDS, IS_CHROME_INCOGNITO,
21 IS_CHROME_NOT_INCOGNITO, MAYBE_CHROME_INCOGNITO, THERE COULD
22 NOT HAVE BEEN ANY DOUBT AS OF FEBRUARY 26TH, 2021, THAT THAT
23 WAS RELEVANT.

24 AND ON MARCH 29, 2021, THEY GAVE US A RESPONSE TO
25 INTERROGATORY 4 AND THEY GAVE US EIGHT MORE NAMES. THEY

1 REFERENCED THE ORIGINAL LIST OF 226 AND THEY GAVE US EIGHT MORE
2 NAMES, BUT DID NOT INCLUDE ANY OF THESE FOUR PEOPLE.

3 NOW, MOREOVER, WE KNOW, FOR EXAMPLE, FROM A PRIVILEGE LOG
4 THAT ON FEBRUARY 1ST, 2021, ALMOST TWO MONTHS BEFORE THE
5 INTERROGATORY RESPONSE, MR. LEUNG WAS ALREADY IN COMMUNICATIONS
6 WITH COUNSEL IN THIS CASE.

7 WE ALSO KNOW, FROM THE METADATA OF AN EXHIBIT THAT WAS --
8 A DOCUMENT THAT WAS GIVEN US ON SEPTEMBER 1ST OF LAST YEAR,
9 THAT'S EXHIBIT 109, WE KNOW FROM EXHIBIT 109'S METADATA THAT
10 THIS WAS PREPARED IN JANUARY OF 2021, PREPARED IN JANUARY OF
11 2021.

12 THIS IS A DOCUMENT THAT IDENTIFIES LIAO, LEUNG, AND LIU AS
13 PEOPLE WITH KNOWLEDGE, BUT THIS WAS ONLY GIVEN TO US ON
14 SEPTEMBER 1ST, 2021. AND INCIDENTALLY, IT WAS GIVEN TO US AS
15 ONE OF 894,000 DOCUMENTS GIVEN TO US THAT DAY, BURIED IN THAT
16 PRODUCTION.

17 BUT THAT WAS, IN ANY EVENT, AFTER THE DEADLINE FOR THE
18 IDENTIFICATION OF CUSTODIANS, AND IT WAS SOMETHING THAT WAS, AT
19 THAT STAGE WHEN WE FINALLY GOT IT, OF LIMITED UTILITY.

20 NOW, LET ME GO ON TO EXHIBIT 15, WHICH THE COURT HAS SEEN
21 BEFORE.

22 THIS GOES TO THE POINT THAT THEY ALSO DIDN'T PRODUCE
23 DOCUMENTS, AND I HAVE NOT HEARD IN THEIR OPENING, AND WE'VE NOT
24 SEEN IN THEIR PAPERS -- NOT THEIR BRIEFS, NOT THEIR PROPOSED
25 FINDINGS -- ANY DISAGREEMENT WITH THE FACT THAT THEY DID NOT

1 PRODUCE A SINGLE DOCUMENT MENTIONING OR REFERRING TO OR
2 RELATING TO THE IS_CHROME_INCOGNITO FIELD.

3 THEY STILL HAVEN'T. THEY'VE GIVEN US NO EXPLANATION FOR
4 WHY THAT DIDN'T HAPPEN.

5 AND, YOU KNOW, I SUBMIT THAT WHATEVER ELSE THEY PRODUCED,
6 THAT BY ITSELF IS SOMETHING THAT IS A SERIOUS FAILURE IN
7 PROVIDING THE DISCOVERY THAT WE'RE ENTITLED TO GET.

8 NEXT, LET ME GO TO THE DECLARATION AND PUT UP CHART 25.

9 THE COURT WILL RECALL THAT ON NOVEMBER 12TH, 2021, THE
10 COURT, IN RESPONSE TO ARGUMENTS THAT WE HAD MADE, ORDERED THAT
11 GOOGLE, THE COURT SAID, "GOOGLE SHALL PROVIDE A DECLARATION,
12 UNDER PENALTY OF PERJURY FROM GOOGLE, NOT COUNSEL, THAT, 1. TO
13 THE BEST OF ITS KNOWLEDGE, GOOGLE HAS PROVIDED A COMPLETE LIST
14 OF DATA SOURCES THAT CONTAIN INFORMATION RELEVANT TO
15 PLAINTIFFS' CLAIMS."

16 AND ON THE 18TH OF THAT MONTH, GOOGLE PROVIDED THAT
17 DECLARATION.

18 NOW, THAT DECLARATION -- IF WE GO TO CHART 17, THAT
19 DECLARATION DID NOT LIST THREE CHARTS, THREE GOOGLE -- THREE
20 GOOGLE LOGS THAT INCLUDED THE IS_CHROME_NON_INCOGNITO FIELD,
21 DID NOT INCLUDE TWO LOGS THAT INCLUDED THE IS_CHROME_INCOGNITO
22 FIELD, AND DID NOT INCLUDE 17 LOGS THAT INCLUDED THE
23 MAYBE_CHROME_INCOGNITO FIELD.

24 AND THERE CANNOT BE ANY DOUBT IN ANYBODY'S MIND, AS OF
25 NOVEMBER 18TH, 2021, THAT THIS WAS RELEVANT.

1 THE COURT WILL RECALL THAT ON JULY 9TH OF 2021, PLAINTIFFS
2 HAD SUBMITTED A BRIEF -- IN FACT, IN THEIR PAPERS TO THIS COURT
3 ON THIS MOTION, THE DEFENDANT REFERS TO THIS BRIEF -- WE
4 PROVIDED A BRIEF THAT LAID OUT EXACTLY WHY ALL OF THESE BITS OR
5 FIELDS WOULD BE RELEVANT.

6 WE DIDN'T KNOW WHAT THEY WERE AT THAT POINT. WE HAD A --
7 WE HAD ONE REFERENCE. AT THAT POINT WE HAD ONE REFERENCE TO
8 MADE -- TO IS_CHROME_NON_INCOGNITO FIELD, ONE DOCUMENT, AND A
9 FEW DOCUMENTS THAT MENTIONED THE MAYBE.

10 AND WHAT WE WERE ASKING FOR IS THAT INFORMATION, AND WE
11 MADE CLEAR WHY WE THOUGHT THAT WAS RELEVANT.

12 AND THAT'S IN EXHIBIT 63 WHICH I WOULD OFFER.

13 MR. SCHAPIRO: NO OBJECTION.

14 THE COURT: ALL RIGHT. LET ME FIND EXHIBIT 63.

15 MR. BOIES: SO --

16 THE COURT: HANG ON ONE MINUTE.

17 (PAUSE IN PROCEEDINGS.)

18 THE COURT: EXHIBIT 3 IS THE SUBMISSION; RIGHT?

19 MR. BOIES: EXHIBIT 63, YES.

20 THE COURT: OKAY.

21 MR. BOIES: AND I RESPECTFULLY SUBMIT THAT NO ONE,
22 AFTER READING THIS, COULD DOUBT THAT WE CONSIDERED THESE
23 FIELDS, TO THE EXTENT THEY EXISTED, TO BE RELEVANT.

24 THE -- YOU KNOW, FOR EXAMPLE, ONE OF THE THINGS WE SAY IN
25 FOUR, "GOOGLE MAINTAINS SYSTEM AND PROCESS TO IDENTIFY

1 INCOGNITO BROWSING."

2 THERE COULD NOT HAVE BEEN ANY DOUBT THAT AT THAT POINT --
3 WE THINK FAR, FAR EARLIER THAN THAT, WE THINK THAT WAS CLEAR
4 FROM OUR INTERROGATORY NUMBER 4 FROM BACK IN FEBRUARY OF
5 2021 -- BUT THERE CERTAINLY COULD NOT HAVE BEEN ANY DOUBT THAT
6 THESE LOGS WERE RELEVANT.

7 GOOGLE, IN ITS PAPERS, IN ITS PROPOSED FINDINGS, DOES NOT
8 DISPUTE THAT THESE LOGS WEREN'T PRODUCED AND GIVES NO
9 EXPLANATION FOR WHY THESE LOGS WEREN'T PRODUCED.

10 NOW, TO GO BACK TO CHART NUMBER 25, THIS COURT'S
11 NOVEMBER 12, 2021 ORDER ALSO ORDERED GOOGLE TO PROVIDE THE
12 SPECIAL MASTER FULL SCHEMAS AND A LIST OF ALL FIELDS, AND THE
13 COURT CAPITALIZED "ALL" FIELDS, WITH THEIR DESCRIPTIONS.

14 AND THAT, OF COURSE, WAS NOT DONE. THE ONLY TWO LOGS THAT
15 WERE IDENTIFIED IN GOOGLE'S DECLARATION THAT INCLUDED ANY OF
16 THE INCOGNITO FIELDS, THE ONLY TWO, THEY DID NOT IDENTIFY THOSE
17 FIELDS TO US.

18 AND YOU'VE HEARD THE EXPLANATION THAT THEY WENT TO THE
19 SPECIAL MASTER AND TOLD THE SPECIAL MASTER THAT THEY ONLY HAD
20 TO DO THE TOP 100 BECAUSE THERE WAS TOO MUCH BURDEN TO DO MORE.

21 WE'RE NOT AWARE, OBVIOUSLY, OF WHAT THEY SAID IN THEIR EX
22 PARTE COMMUNICATIONS WITH THE SPECIAL MASTER.

23 BUT WE DOUBT HIGHLY THAT THEY TOLD THE SPECIAL MASTER
24 ANYTHING ABOUT THESE INCOGNITO FIELDS. WE DOUBT VERY HIGHLY
25 THAT THEY TOLD THE SPECIAL MASTER THERE ARE THESE ONE BIT

1 FIELDS THAT ARE CLEARLY RELEVANT UNDER WHAT THE PLAINTIFFS HAVE
2 BEEN TRYING TO GET, WHAT THE PLAINTIFFS ASKED FOR IN
3 INTERROGATORY NUMBER 4, WHAT THE PLAINTIFFS ASKED FOR IN
4 EXHIBIT 63, WE DOUBT VERY HIGHLY THAT THEY TOLD THE SPECIAL
5 MASTER THESE ONE BIT FIELDS EXISTED HERE, THESE RELEVANT ONE
6 BIT FIELDS EXISTED HERE, BUT WE SHOULDN'T HAVE TO PRODUCE THEM.

7 LET ME GO TO THE LIAO DEPOSITION AND PUT UP CHART 18.

8 AND I -- I WOULD REFER TO SOME OF THESE PORTIONS, BUT I
9 WOULD ASK THE COURT TO READ PAGES 133 TO 140 OF MR. LIAO'S
10 DEPOSITION.

11 AND I RESPECTFULLY SUBMIT THAT YOU CANNOT READ THOSE PAGES
12 AND UNDERSTAND THAT GOOGLE HAD, AT THE VERY TIME THAT THIS
13 DEPOSITION WAS GOING ON, A PROGRAM OF LOGGING THE
14 MAYBE_CHROME_INCOGNITO SIGNAL, TRACKING IT, IMPLEMENTING IT,
15 AND ULTIMATELY CONCLUDING THAT IT WAS ACCURATE IN RECORDING THE
16 USAGE OF INCOGNITO.

17 HE TALKS ABOUT IT BEING A HYPOTHETICAL SIGNAL. HE TALKS
18 ABOUT THERE BEING NO SUCH FURTHER ACTION WAS TAKEN TO BUILD
19 SUCH A HYPOTHETICAL SIGNAL.

20 AND YET, AT THE SAME TIME THAT THAT WAS GOING ON, THEY HAD
21 THESE LOGS THAT LOGGED THAT SIGNAL AND THEY WERE TRACKING THAT
22 INFORMATION TO TRY TO DETERMINE WHETHER IT WAS CONSISTENT WITH
23 WHAT THEY KNEW TO BE THE OVERALL USAGE OF INCOGNITO.

24 THE COURT WILL RECALL FROM THE OPENING, I SHOWED THE CHART
25 IN WHICH THEY SAID THAT 3.08 PERCENT USAGE WAS THE TRUE GROUND

1 ZERO, AND THEY THEN COMPARED WHAT THEY WERE GETTING FROM THESE
2 INCOGNITO DETECTION BITS TO THAT STANDARD.

3 AND IF WE GO TO THE FIRST PAGE OF EXHIBIT 88, AT THE VERY
4 BOTTOM YOU SEE A MEETING -- AND THIS IS BETWEEN MS. LIU AND
5 MR. LEUNG -- AND THEY HAVE A MEETING ON JANUARY 27TH, 2022.
6 AND THEY SAY, "INCOGNITO RATE IS STILL TOO HIGH."

7 SO WHAT THEY'RE DOING IS NOT ONLY ARE THEY LOGGING AND
8 ANALYZING THE RATE, BUT THEY ARE COMPARING IT TO THE 3.08
9 PERCENT RATE THAT THEY KNOW IS THEIR TARGET.

10 AND THEN ABOUT A MONTH LATER -- ACTUALLY, IT WAS ONLY
11 ABOUT A WEEK LATER -- IT'S THE NEXT MONTH, BUT ONLY ABOUT A
12 WEEK LATER -- ON FEBRUARY 3RD, 2022, THEY SAY "GOOD NEWS:
13 CHROME INCOGNITO RATE IS NOW ABOUT 3 PERCENT."

14 THAT IS, THEY HAVE NOW VALIDATED THAT THE CHROME INCOGNITO
15 DETECTION FIELDS ARE ACCURATELY COMPILING CHROME USAGE IN THE
16 INCOGNITO MODE.

17 NOW, AGAIN, I WANT TO EMPHASIZE THAT WHETHER THIS IS TRUE
18 OR NOT, WHETHER IT'S ACCURATE OR NOT, EXACTLY WHAT THEY WERE
19 DOING IS NOT CRITICAL FOR THIS MOTION, EVEN IF IT PROVED --
20 EVEN IF THEY WERE SOMEHOW ABLE TO COME IN AND PROVE THAT ALL
21 THESE PEOPLE WERE WRONG AND IT WAS NOT RELIABLE, WE WERE STILL
22 ENTITLED TO NOW ABOUT IT. THEY WERE OBLIGATED UNDER THIS
23 COURT'S ORDER AND DISCOVERY OBLIGATIONS TO SHOW IT TO US.

24 NOW, I WANT TO TOUCH JUST BRIEFLY ON THE PRESERVATION
25 ISSUE BECAUSE THIS GOES IN PART TO THE KIND OF PREJUDICE THAT

1 WE SUFFER.

2 THE COURT WILL RECALL THAT THE -- I'M GOING TO JUST SEE IF
3 I CAN FIND ONE CHART.

4 (DISCUSSION OFF THE RECORD BETWEEN PLAINTIFFS' COUNSEL.)

5 MR. BOIES: I CAN'T, BUT IN THE INTEREST OF TIME,
6 I'LL JUST SUMMARIZE IT. I KNOW THE COURT IS FAMILIAR WITH THIS
7 IN ANY EVENT.

8 THEY KEPT COMING IN AND SAYING HOW BURDENSOME IT WOULD BE
9 TO PRESERVE THE DATA.

10 WHAT WE DIDN'T KNOW, BECAUSE THEY DIDN'T IDENTIFY THE
11 EMPLOYEES WHO KNEW, THEY DIDN'T GIVE US THE DOCUMENTS, THEY
12 DIDN'T PRODUCE THE DATA, WE DIDN'T KNOW THAT THESE BITS
13 EXISTED.

14 BUT IF WE HAD KNOWN THESE BITS EXISTED, WE COULD HAVE GONE
15 TO THE COURT, WE COULD HAVE SAID, JUST PRESERVE THESE, THESE
16 SMALL BITS, JUST THIS SMALL AMOUNT OF DATA, PRESERVE THAT.

17 AND, YOU KNOW, I DON'T WANT TO SPEAK FOR THE COURT, BUT I
18 THINK THE COURT MIGHT HAVE THOUGHT THAT THAT WAS NOT AN
19 UNREASONABLE BURDEN TO PLACE ON THEM.

20 BUT WE LOST THAT OPPORTUNITY BECAUSE WE DIDN'T KNOW AND
21 THE COURT DIDN'T KNOW WHAT IT WAS.

22 AND I HAVE FOUND CHART 16, AND I JUST WANT TO REMIND THE
23 COURT WHAT THEY SAID, FOR EXAMPLE, ON FEBRUARY 5, 2021. "LOG
24 DATA IS NOT REASONABLY LIMITED BY GEOGRAPHIC REGION, BY
25 BROWSER, OR BY BROWSER MODE."

1 WHAT THEY DIDN'T TELL THE COURT WAS THAT THERE WERE LOGS
2 THAT HAD LIMITATIONS BY BROWSER MODE. THEY HAD THE INCOGNITO
3 SIGNALS. THEY HAD THOSE FIELDS.

4 AND WHAT THEY TOLD THE COURT HERE WAS SIMPLY INCONSISTENT
5 WITH THE EXISTENCE OF THOSE, OF THOSE LOGS.

6 I APPRECIATE THE COURT'S INDULGENCE.

7 MS. ANDERSON WILL BRIEFLY ADDRESS THE ISSUE OF REMEDY.

8 THE COURT: THANK YOU VERY MUCH.

9 MR. BOIES: THANK YOU.

10 MS. ANDERSON: GOOD AFTERNOON, YOUR HONOR.

11 THE COURT: GOOD AFTERNOON.

12 MS. ANDERSON: I'M GOING TO TRY TO GO THROUGH THIS
13 REALLY QUICKLY. I KNOW WE'RE TRYING TO SAVE SOME TIME.

14 AND SO TO APPEASE ANY WORRY, WE ARE GOING TO PROVIDE THESE
15 SLIDES TO THE COURT AFTERWARDS SO THAT THEY'LL STILL BE
16 AVAILABLE, SO I'M GOING TO GO THROUGH THEM PRETTY QUICKLY.

17 THE COURT: DO I HAVE A HARD COPY OF THESE YET?

18 MS. ANDERSON: YES, WE'LL GIVE YOU A HARD COPY OF
19 THESE SLIDES.

20 THE COURT: HAVE YOU ALREADY GIVEN IT TO ME?

21 MS. ANDERSON: I DON'T THINK THAT WE HAVE.

22 THE COURT: OKAY. THAT'S FINE. THAT'S FINE.

23 MS. ANDERSON: BUT WE WILL.

24 THE COURT: I WILL SAY THIS AGAIN BEFORE WE END, BUT
25 I'D LIKE ELECTRONIC COPIES OF WHATEVER THE DEMONSTRATIVES ARE

1 THAT ARE USED TODAY.

2 MS. ANDERSON: OKAY.

3 THE COURT: I KNOW WE GOT DOWNLOADS AND I'VE GOT LOTS
4 OF BINDERS. BUT FROM WHAT YOU USE TODAY, I'D LIKE TO GET AN
5 ELECTRONIC COPY.

6 MS. ANDERSON: AND WE CAN EASILY DO THAT, SO WE'LL DO
7 THAT FOR YOU, YOUR HONOR.

8 BEFORE I START, THOUGH, TO TALK THROUGH OUR REQUESTED
9 RELIEF, I THINK IT IS IMPORTANT TO SAY -- AND GOOGLE DID POINT
10 OUT -- THAT SOME OF THIS HAS BEEN SORT OF A MOVING TARGET OR
11 SHIFTING THROUGHOUT THE PAPERS, AND SOME OF THAT HAS BEEN, YOU
12 KNOW, BECAUSE AS THESE PAPERS WERE FILED, WE WERE LEARNING MORE
13 AND MORE.

14 SO, YOU KNOW, WE REALLY TOOK TO HEART AND TRIED TO TAILOR
15 THESE REMEDIES AND THE REQUESTED RELIEF TO THE PREJUDICE THAT
16 WE BELIEVE WE HAVE SUFFERED FROM THIS, AND SO THAT'S WHY, YOU
17 KNOW, I THINK YOU'VE SEEN THEM CHANGE A BIT.

18 BUT HERE IS, YOU KNOW, HOW WE'VE PRESENTED THEM IN OUR
19 CONCLUSIONS OF LAW, AS WELL AS HOW WE'LL BE PRESENTING THEM
20 TODAY.

21 SO THERE ARE SORT OF FOUR CATEGORIES. THE FIRST IS
22 PRECLUSION ORDERS; SECOND IS JURY INSTRUCTIONS; THIRD IS
23 PRESUMPTION; AND FOURTH IS FOR MONETARY RELIEF.

24 SO WE CAN GO TO THE FIRST. AND HERE WE'VE STATED THAT
25 WE'RE LOOKING FOR TWO PRECLUSION ORDERS: ONE IS THAT GOOGLE IS

1 PRECLUDED FROM MAKING ANY ARGUMENTS ABOUT ANY INCOGNITO
2 DETECTION BIT FOR THE DURATION OF THE CASE; AND THE SECOND IS
3 GOOGLE MAY NOT RELY ON TESTIMONY BY MR. FIARD OR ANY OTHER
4 EMPLOYEE NOT IDENTIFIED IN RESPONSE TO PLAINTIFFS'
5 INTERROGATORY NUMBER 4.

6 THE SECOND -- AND THE REASON WE THINK THAT'S IMPORTANT IS
7 THERE'S BEEN A LOT OF ARGUMENT THAT THIS WASN'T RELIABLE, YOU
8 KNOW, THIS DATA.

9 BUT HOW DO WE KNOW? WE DIDN'T GET IT. WE COULDN'T TEST
10 IT. WE WEREN'T GIVEN THE OPPORTUNITY TO LET OUR EXPERTS
11 EXAMINE THIS DATA. AND SO THAT IS WHY WE THINK THIS PRECLUSION
12 ORDER IS IMPORTANT.

13 GO TO THE NEXT SLIDE.

14 AND THEN WE'RE REQUESTING SOME JURY INSTRUCTIONS: GOOGLE
15 CONCEALED AND ALTERED EVIDENCE REGARDING ITS ABILITY TO
16 IDENTIFY INCOGNITO TRAFFIC; GOOGLE FAILED TO DISCLOSE TO
17 PLAINTIFFS THE NAMES OF KEY GOOGLE EMPLOYEES RESPONSIBLE FOR
18 DEVELOPING AND IMPLEMENTING GOOGLE'S INCOGNITO-DETECTION BITS;
19 AND THAT GOOGLE DURING THE COURSE OF THIS LITIGATION DELETED
20 DATA THAT WOULD HAVE BEEN UNFAVORABLE TO GOOGLE'S POSITIONS IN
21 THIS LITIGATION."

22 NOW, IF WE CAN JUST -- WE CAN SKIP THROUGH THESE, I
23 THINK -- AND I'M HAPPY TO ANSWER ANY QUESTIONS, AND SORT OF THE
24 BASIS IN WHICH RULES --

25 MR. SCHAPIRO: YOUR HONOR, CAN I JUST RISE WITH AN

1 OBJECTION? MAYBE I'M NOT SEEING SOMETHING CORRECTLY.

2 AM I -- THESE DO NOT APPEAR TO COMPORT WITH THE SANCTIONS
3 THAT WERE REQUESTED IN THE BRIEFING AND THAT WE BRIEFED AND
4 THAT WE'RE PREPARED TO ADDRESS TODAY AND AS TO WHICH WE HAVE
5 RESEARCHED THE LAW. MS. VIOLA IS LOOKING.

6 AM I MISUNDERSTANDING THAT?

7 MS. ANDERSON: SO WE DID ADD A LITTLE BIT IN OUR
8 CONCLUSIONS OF LAW, SO THERE WERE ADDITIONAL REQUESTS MADE
9 WITHIN THAT.

10 AND THAT, AS I WAS TRYING TO EXPLAIN, YOUR HONOR -- AND
11 YOUR HONOR'S --

12 THE COURT: WELL, FIRST, LET'S GO BACK TO THE SLIDE
13 ON CONCLUSIONS, BECAUSE I HAD A SIMILAR QUESTION.

14 YOU MAY BE SEATED, MR. SCHAPIRO. THANK YOU.

15 AND THIS IS AS GOOD A TIME AS ANY.

16 SO THE SECOND REQUEST, NOT TO RELY ON TESTIMONY OF ANY
17 EMPLOYEE NOT IDENTIFIED IN RESPONSE TO INTERROGATORY 4, I DON'T
18 RECALL SEEING THAT IN THE BRIEFING. BUT IT -- IS IT? OR IS
19 THIS THE FIRST TIME YOU'RE REQUESTING THAT?

20 MS. ANDERSON: I BELIEVE IT WAS IN OUR CONCLUSIONS OF
21 LAW. YEAH, SO IT WAS IN OUR CONCLUSIONS OF LAW. SO IT WAS NOT
22 IN THE FILING -- IN THE BRIEFING PAPERS.

23 THE COURT: OKAY.

24 MS. ANDERSON: SO THAT'S WHAT WE'RE TRYING TO
25 EXPLAIN, THAT WE -- WE REALLY DID TRY TO -- IN FACT, THIS IS A

1 BIT NARROWER THAN I THINK WE ATTEMPTED TO DO IN OUR FIRST
2 PAPERS.

3 AND --

4 THE COURT: OKAY.

5 MS. ANDERSON: -- IN SPEAKING TO A SPECIFIC
6 INTERROGATORY AS WELL TO TRY TO MAKE THAT REASONABLY TAILORED
7 TO THE REMEDY, OR TO THE PREJUDICE THAT WE BELIEVE WE SUFFERED.

8 THE COURT: I'LL KEEP THAT IN MIND, THAT THAT'S WHERE
9 IT WAS PRESENTED.

10 OKAY. AND THEN GO TO THE NEXT SLIDE. I THINK I
11 UNDERSTAND THIS POINT. I BELIEVE THIS WAS IN THE BRIEF.

12 AND THE NEXT SLIDE, PLEASE.

13 MS. ANDERSON: AND I THINK WE HAD ASKED FOR THE
14 BROADER ONE, AND SO WE'RE OFFERING SOME MORE NARROWLY TAILORED
15 OPTIONS HERE.

16 THE COURT: ALL RIGHT.

17 MS. ANDERSON: SO IF WE CAN GO TO THE NEXT SLIDE.

18 AND THEN IT -- THE COURT IS WELL AWARE, UNDER THE FACEBOOK
19 PAPERS, SORT OF THE SUPPORT FOR EACH OF THESE, SO I WAS GOING
20 TO THEN JUST MOVE TO THE REQUESTED RELIEF UNLESS YOU HAD ANY
21 QUESTIONS.

22 THE COURT: MR. SCHAPIRO, DID YOU WANT TO BE HEARD?

23 MR. SCHAPIRO: YES, YOUR HONOR.

24 SO WE HAVE NOT HAD A CHANCE TO BRIEF OR RESEARCH THE LAW
25 OR THE ARGUMENTS ON THESE SANCTIONS.

1 NOW, I AM OPTIMISTIC THAT WHEN WE'RE FINISHED TODAY,
2 YOU'RE GOING TO CONCLUDE THAT NO SANCTIONS OF ANY TYPE ARE IN
3 ORDER.

4 THE COURT: ALL RIGHT.

5 MR. SCHAPIRO: SO I DON'T WANT TO DELAY THINGS BY
6 ASKING IN ANY WAY FOR ANY MORE BRIEFING, BUT I DO WANT TO LODGE
7 AN OBJECTION, BECAUSE WE'RE HERE READY TO EXPLAIN WHY -- AND
8 MAYBE THIS IS WHY THEY CHANGED IT A COUPLE DAYS AGO
9 APPARENTLY -- WHY THE SANCTIONS THAT THEY REQUESTED IN THE
10 BRIEFING THAT WE ALL SPENT A LOT OF TIME AND ENERGY ON ARE
11 UNWARRANTED AND WOULD BE ERROR. SO I WANT TO LODGE MY
12 OBJECTION.

13 BUT I DON'T THINK YOU'RE GOING TO IMPOSE ANY SANCTIONS,
14 SO --

15 THE COURT: I UNDERSTAND, AND I -- IF I FEEL LIKE I
16 NEED MORE BRIEFING ON THE ISSUES OF REMEDY, I'VE RARELY BEEN
17 SHY ABOUT ASKING FOR MORE BRIEFING.

18 MR. SCHAPIRO: WE UNDERSTAND.

19 THANK YOU, YOUR HONOR.

20 THE COURT: WE'LL TURN TO THAT IF AND WHEN NEEDED.

21 I DO WANT TO KEEP US MOVING --

22 MS. ANDERSON: YES.

23 THE COURT: -- SO LET'S GO AHEAD AND PROCEED WITH THE
24 PRESENTATION. I UNDERSTAND THAT THESE HAVE BEEN FURTHER
25 REFINED SINCE THE FINAL BRIEFING.

1 MS. ANDERSON: AND THE LAW AND THE BASIS REMAIN THE
2 SAME. IT'S JUST TRYING TO NARROWLY TAILOR THESE.

3 THE THIRD IS A PRESUMPTION, THAT THE COURT PRESUMES FOR
4 ALL PURPOSES IN THIS CASE THAT THE DATA GOOGLE DELETED WAS
5 UNFAVORABLE TO GOOGLE.

6 AND THE FOURTH IS THE MONETARY REQUESTS RELATED TO THE
7 COSTS OF THE SPECIAL MASTER PROCESS, AS WELL AS PREPARING FOR
8 AND DOING THESE MOTIONS.

9 BUT AT THE END OF THE DAY, THE POINT BEING, AND WE CAN --
10 YOU KNOW, WE CAN TALK ABOUT DIFFERENT WAYS TO TAILOR THESE
11 SANCTIONS, BUT THE POINT IS THAT MONETARY SANCTIONS HERE JUST
12 ISN'T ENOUGH. IT JUST ISN'T GOING TO DETER GOOGLE AND IT'S NOT
13 GOING TO REMEDY THE PLAINTIFFS' HARM.

14 IT'S -- AND THE POINT IS, IT WAS LIKE A SNOWBALL, YOU
15 KNOW, GOING DOWNHILL. IT STARTED IN THE PRESERVATION ARGUMENTS
16 WHEN IT WAS FOCUSED ON THE X-CLIENT DATA HEADER AND THERE WAS
17 NO DISCUSSION THAT THERE WERE OTHER WAYS TO TRY TO TRACK
18 INCOGNITO TRAFFIC, THAT THERE WERE OTHER WAYS TO PRESERVE THIS
19 DATA IN A MORE NARROW SET, AND THAT THERE WERE WAYS -- AND IT
20 WASN'T -- YOU KNOW, THE INCOGNITO BITS DON'T JUST USE THE
21 X-CLIENT DATA HEADER, SO IT'S NOT THE SAME THING.

22 AND THERE WAS A LOT OF ARGUMENT ABOUT THAT AND PAPERS BACK
23 AND FORTH AND IT WAS NOT EVEN RAISED THAT THERE WAS THIS OTHER
24 POSSIBILITY.

25 AND THE SNOWBALL STARTED FROM THERE AND IT JUST CONTINUED

1 TO GO DOWNHILL AS WE DIDN'T HAVE THE DATA, IT DIDN'T GET
2 PRESERVED, THE DATA GOT DELETED.

3 WE THEN GO INTO FACT DISCOVERY WITHOUT UNDERSTANDING THESE
4 BITS, WITHOUT HAVING THIS DATA, WE DON'T GET THE DOCUMENTS
5 ABOUT THESE BITS THAT ARE RELEVANT.

6 AND THEN, YOU KNOW, WE HEAD INTO EXPERTS AND WE DON'T HAVE
7 THIS DATA. WE STILL DON'T HAVE THIS DATA.

8 THE LAST AND FINAL EXPERT REPORT IS DUE TOMORROW EVEN, AND
9 SO IT REALLY JUST SORT OF COMPOUNDED UPON ITSELF AS IT WENT
10 THROUGH.

11 AND IT'S INHERENTLY UNFAIR TO LET GOOGLE DELETE RELEVANT
12 EVIDENCE AND THEN ARGUE ABOUT THE ABSENCE OF THAT EVIDENCE, OR
13 ARGUE TO THE PLAINTIFFS AND TO THE COURT THAT IT WASN'T
14 RELIABLE WHEN WE JUST HAVE TO TAKE THEIR WORD FOR IT.

15 WE DON'T HAVE THE DATA TO BE ABLE TO TEST THAT OR TO SHOW
16 THAT IT WAS OR WAS NOT RELIABLE.

17 AND SO AT THE END OF THE DAY, IT'S REALLY FOCUSSED ON
18 THIS IDEA THAT THEY JUST CAN'T BENEFIT FROM DELETING THIS DATA,
19 AND IT CAN'T JUST BE MONETARY SANCTIONS.

20 AND IF WHATEVER EXACTLY THESE ISSUE PRECLUSIONS OR
21 PRESUMPTIONS ARE, YOU KNOW, WE COULD EVEN ADDRESS THOSE WHEN
22 GOOGLE FILES THEIR PAPERS, WHEN THEY DO THEIR, YOU KNOW, THEIR
23 FILINGS FOR CLASS CERTIFICATION WHEN WE'RE HEADED, YOU KNOW,
24 WHEN WE'RE HEADED INTO TRIAL TO SEE WHAT ARGUMENTS THEY
25 ACTUALLY ARE MAKING AND THEN TO SEE WHICH ONES ARE UNFAIR.

1 IT'S JUST THE POINT IS THERE HAS TO BE SOMETHING THAT THEY
2 CANNOT ARGUE ABOUT THE DATA THEY DELETED, AND THEY JUST CANNOT
3 ARGUE WHAT IT WOULD SHOW, WHAT IT WOULDN'T SHOW, OR ARGUE THAT
4 WE HAVE AN ABSENCE OF PROOF THAT WOULD HAVE BEEN IN THAT DATA.

5 AND THE COURT CAN, AS THOSE PAPERS COME IN, YOU KNOW,
6 UNDER THE LAW, AS IT SAYS, TO TAILOR THE SANCTIONS SO THAT
7 THEY'RE REASONABLY RELATED TO WHAT HAPPENED HERE. YOU CAN DO
8 THAT, YOU KNOW, AS WE GO THROUGH THE PROCESS IF WE DON'T WANT
9 TO DO THOSE NOW.

10 BUT THAT'S THE REAL POINT AND THAT'S THE REAL HEART OF
11 THIS MATTER.

12 AND THE PLAINTIFFS SUFFERED SERIOUS CONSEQUENCES. THE
13 DATA IS LOST. WE CAN'T LOOK AT THIS DATA TO TEST ANYTHING, TO
14 FIGURE OUT -- YOU KNOW, WE'RE JUST LEFT HERE HAVING TO ACCEPT
15 GOOGLE'S WORD ABOUT WHETHER IT WAS RELIABLE, IF IT WAS
16 RELIABLE, WHAT IT DOES, HOW IT INTERACTS WITH OTHER LOGS AND
17 PROFILES, AND ALL OF THAT IS ALL HYPOTHETICAL BECAUSE WE DON'T
18 HAVE THE DATA TO ACTUALLY BE WORKING WITH.

19 SO UNLESS YOUR HONOR HAS ANY QUESTIONS, I THINK --

20 THE COURT: I DO HAVE A QUESTION --

21 MS. ANDERSON: OKAY.

22 THE COURT: -- WHICH IS -- AND IT WAS -- AGAIN, IT
23 WASN'T QUITE CLEAR TO ME FROM THE PAPERS, ARE THE PLAINTIFFS
24 ASKING FOR SOMETHING THAT IS ASKING FOR FURTHER PRODUCTION?

25 I UNDERSTAND THE REMEDIES THAT YOU'RE ASKING FOR, BUT IS

1 THERE SOMETHING THAT SPECIFICALLY -- IT WASN'T CLEAR TO ME IF
2 YOU WERE STILL ASKING THAT SOMETHING ELSE BE TURNED OVER.

3 MR. BOIES: YES, YOUR HONOR. IF I COULD JUST ADDRESS
4 THAT BRIEFLY?

5 THE COURT: IF YOU WOULD, PLEASE.

6 MR. BOIES: WE ARE. WE STILL DON'T THINK WE HAVE
7 GOTTEN ALL OF THE DOCUMENTS AND ALL OF THE LOGS THAT USE THESE
8 SIGNALS.

9 IT IS NOT CONCEIVABLE TO US THAT THERE'S NOT A SINGLE
10 DOCUMENT IN THEIR FILES THAT MENTIONS IS_CHROME_INCOGNITO.

11 BASED ON OUR EXPERTS' ANALYSIS, WE ARE VERY, VERY DUBIOUS
12 THAT THEY HAVE PRODUCED ALL OF THE LOGS THAT HAVE THESE FIELDS
13 IN THEM.

14 THEY HAVE NOT EVEN SAID TO THE COURT, OR TO US,
15 DEFINITELY, THESE ARE THE ONLY FIELDS OR SIGNALS THAT WE
16 DEVELOPED OR TRIED TO DEVELOP TO DETECT INCOGNITO BROWSING.

17 SO WE ARE -- WE'RE ASKING FOR WHAT IS THERE THAT THEY
18 HAVEN'T GIVEN US.

19 AS I SAID, THEY HAVE -- THEY GAVE US A HANDFUL OF
20 DOCUMENTS ABOUT THE MAYBE FIELD. THEN WHEN WE BROUGHT THIS
21 MOTION, THEY GAVE US NINE TIMES AS MANY DOCUMENTS.

22 NOW, WHETHER THAT'S ALL THE DOCUMENTS THEY HAVE THAT
23 MENTION THAT FIELD OR NOT, WE DON'T KNOW.

24 BUT WE ARE ASKING TO SORT OF COMPLETE THE DISCOVERY AND
25 COMPLETE THEIR REPRESENTATIONS TO THE COURT THAT THEY HAVE

1 FULLY COMPLIED.

2 THE COURT: ALL RIGHT. THANK YOU. THANK YOU,
3 MR. BOIES.

4 MR. MAO: YOUR HONOR, IF I MAY JUST MENTION SOMETHING
5 REAL QUICKLY PROCEDURALLY?

6 THE COURT: YES.

7 MR. MAO: AND I'LL BE QUICK. I'LL BE A MINUTE.

8 ONE OF THE BIG ISSUES, YOUR HONOR, IS THAT, AS YOU CAN
9 APPRECIATE, THE TECHNICAL EXPERT REPORTS WERE DUE LAST WEEK.

10 THE ITERATIVE PROCESS WHICH YOU HAD ORDERED IN NOVEMBER, I
11 BELIEVE, WAS ITERATIVE SEARCHES COULD BE TESTED, QUALITY COULD
12 BE ASSURED. THE OBJECTIVE WAS NOT TO FIRST SEE EACH OTHER'S
13 EXPERT REPORTS, AND THEN DEAL WITH HOW DATA MAY BE PRODUCED,
14 AND THEN ARGUE ABOUT THAT IN REBUTTAL, ESPECIALLY WITHOUT
15 PLAINTIFFS HAVING HAD AN OPPORTUNITY TO EXAMINE THEM.

16 THE OTHER THING IS I DO NOT BELIEVE THERE'S GOING TO BE
17 ANY DISPUTE THAT THIS DATA IS STILL BEING USED TO OBTAIN
18 ADVERTISING REVENUE AND OTHER REVENUE, BUT AS A RESULT OF THAT,
19 THERE IS SOME URGENCY ON BEHALF OF THE CLASS MEMBERS IN ORDER
20 FOR US TO OBTAIN RELIEF.

21 WE, TOO, LIKE THE SPECIAL MASTER AND YOUR HONOR, WOULD
22 LIKE TO CONCLUDE THE PROCESS.

23 ONE OF THE PROBLEMS IS THAT THE PROCESS, IF I MAY
24 EUPHEMISTICALLY SAY, HAS BEEN SOMEWHAT KINKED, AND THAT IS ONE
25 OF THE PREJUDICES THAT WE JUST CANNOT COME BACK FROM.

1 THE COURT: I'M SORRY. WAS THERE AN ASK THERE, OR IS
2 THAT JUST A FURTHER ARGUMENT? I UNDERSTAND THE ARGUMENT.

3 MR. MAO: OKAY.

4 THE COURT: WERE YOU ASKING FOR SOMETHING IN TERMS OF
5 FURTHER THINGS?

6 MR. MAO: NO, NOT BEYOND WHAT MR. BOIES AND
7 MS. ANDERSON HAS SAID.

8 THE COURT: OKAY. GOT IT. THANK YOU.

9 MS. ANDERSON: I THINK WHAT MR. MAO WAS JUST TRYING
10 TO SAY IS WE CAN'T UNRING THE BELL.

11 THE COURT: I GOT IT.

12 MS. ANDERSON: WE'RE SO FAR DOWN THAT WE CAN'T GO
13 BACK AND REDEPOSE WITNESSES AND DO THOSE THINGS.

14 THE COURT: I GOT IT.

15 MS. ANDERSON: DO YOU HAVE ANY OTHER QUESTIONS?

16 THE COURT: I DON'T.

17 MS. ANDERSON: OKAY. THANK YOU.

18 MR. BOIES: ONE HOUSEKEEPING, YOUR HONOR. I THINK I
19 FORGOT TO OFFER EXHIBIT 109 THAT I MENTIONED. I WOULD OFFER
20 EXHIBIT 109. THAT'S THE DOCUMENT THAT WE'VE SEEN, SEPTEMBER 1,
21 THAT LISTS THE RELEVANT GOOGLE EMPLOYEES.

22 THE COURT: I HAVE IT OFFERED AND ADMITTED. WAS
23 THERE ANY OBJECTION?

24 MR. SCHAPIRO: NO.

25 THE COURT: OKAY. 109, TO BE CLEAR, IS ADMITTED.

1 THE CLERK: YOUR HONOR, CAN I VERIFY, 63 WAS ALSO
2 ADMITTED.

3 THE COURT: YES, IT WAS.

4 THE CLERK: THANK YOU.

5 (PLAINTIFFS' EXHIBITS 63 AND 109 WERE ADMITTED IN
6 EVIDENCE.)

7 MS. ANDERSON: AND ALSO A HOUSEKEEPING MATTER, AND I
8 THINK I UNDERSTOOD FROM THE PHONE CALL, BUT ANYTHING THAT WAS
9 ALREADY IN THE RECORD AS EXHIBITS, WE CAN CONSIDER AS IN THE
10 RECORD?

11 THE COURT: THAT'S RIGHT.

12 MS. ANDERSON: OKAY, GREAT. THANK YOU.

13 THE COURT: WE'RE NOT GOING TO READMIT FROM PREVIOUS
14 PROCEEDINGS EVERYTHING ELSE THAT WE'VE ALREADY COVERED.

15 ALL RIGHT. LET'S MOVE TO THE DEFENDANTS, PLEASE.

16 MR. MCGEE: GOOD MORNING, YOUR HONOR. RYAN MCGEE.

17 I WAS GOING TO ASK, JUDGE, I BELIEVE WE SUBMITTED THE
18 EXHIBIT LIST TO YOUR HONOR WITH THE 109. WE'VE SINCE BEEN
19 UPDATING THAT. IS THERE AN ISSUE WITH US JUST MOVING ALL OF
20 THAT INTO EVIDENCE? I KNOW THAT WE'RE TRYING TO ACHIEVE SOME
21 TIME EFFICIENCIES HERE.

22 THE COURT: ALL OF WHAT?

23 MR. MCGEE: THE 109 EXHIBITS THAT WERE SUBMITTED
24 WITHIN THE TABLE LAST NIGHT, AND I BELIEVE THERE WERE TWO OR
25 THREE THAT WERE ADDRESSED TODAY.

1 THE COURT: I ASSUME MOST OF THESE DOCUMENTS ARE
2 ALREADY IN THE COURT RECORD.

3 MR. MCGEE: MANY OF THEM HAVE DOCKET ENTRIES.

4 THE COURT: THEN WE'RE NOT GOING TO MOVE THEM IN
5 AGAIN IN THIS PROCEEDING.

6 MR. MCGEE: SO I GUESS ANY THAT DO NOT HAVE DOCKET
7 ENTRIES --

8 THE COURT: ALL I'M EXPECTING TO MOVE IN THIS THROUGH
9 THIS PROCEEDING ARE DOCUMENTS THAT ARE USED IN THE PROCEEDING
10 THAT ARE NOT OTHERWISE IN THE RECORD.

11 MR. MAO: SO THAT RAISES A, A PROCEDURAL CONUNDRUM,
12 YOUR HONOR. WE JUST WANT TO MAKE SURE THAT WE WILL HAVE THE
13 OPPORTUNITY TO EXAMINE THE WITNESSES THAT WERE IDENTIFIED BY
14 DEFENDANT, AND ONE OF THE REASONS WHY MR. MCGEE WAS ASKING THAT
15 QUESTION WAS BECAUSE WE WILL NEED THAT EVIDENCE FOR DEFENDANTS'
16 WITNESSES WHICH WE'RE EXPECTING TO EXAMINE.

17 THE COURT: OKAY.

18 MR. MAO: SO HOPEFULLY THAT CLARIFIES IT A LITTLE
19 BIT, WHICH IS WHY WE WANTED ALL OF THAT IN THERE BECAUSE WE MAY
20 USE IT IN EXAMINATION. SO SORRY FOR THAT.

21 THE COURT: WELL, LET'S SEE HOW THAT GOES.

22 MR. MAO: SURE. THANK YOU.

23 THE COURT: ALL RIGHT.

24 FROM GOOGLE?

25 MR. SCHAPIRO: I'VE NOTICED THAT THERE WAS SOMETIMES

1 A BUZZING. I DON'T KNOW IF PEOPLE ARE HEARING IT, AND I DON'T
2 KNOW IF THERE'S A -- SOMETHING WITH THE AUDIO SYSTEM. I DON'T
3 KNOW IF THERE'S SOMETHING THAT WE'RE DOING OR SOME SIMPLE TRICK
4 THAT --

5 THE CLERK: IT'S THE AUDIO SYSTEM. APOLOGIES. IT
6 JUST BUZZES.

7 MR. SCHAPIRO: THAT'S TOTALLY FINE. TOTALLY FINE.

8 YOUR HONOR, I THINK IN MANY WAYS WHAT WE HAVE SEEN THUS
9 FAR TODAY IS THE INCREDIBLE SHRINKING CASE.

10 WHEN THE PLAINTIFFS' OPENING BRIEF WAS FILED, IT WAS FULL
11 OF ALLEGATIONS OF INTENTIONAL DELETION OF MATERIAL. IT WAS
12 FULL OF ALLEGATIONS THAT WE HAD ALTERED EVIDENCE. THE FOCUS
13 WAS ON THE MAYBE_CHROME_INCOGNITO BIT. THE REQUEST FOR
14 SANCTIONS WAS BROAD, SWEEPING, AT LEAST QUITE DIFFERENT THAN IT
15 IS TODAY. THE CLAIMS OF PREJUDICE WERE FAR BROADER.

16 THEN WE RESPONDED AND WE SHOWED THE PLAINTIFFS THAT MUCH
17 OF WHAT THEY WERE COMPLAINING ABOUT HAD ALREADY BEEN PRODUCED
18 TO THEM. WE SHOWED THEM WHERE THEY HAD ACTUALLY CITED SOME OF
19 THESE DOCUMENTS OR PIECES OF EVIDENCE IN THEIR OWN PAPERS.

20 WE SHOWED THEM WHY SOME OF THE SANCTIONS THEY WERE ASKING
21 FOR WOULD ACTUALLY UNDERMINE THE ABILITY OF ANY COURT TO RUN A
22 REASONABLE CLASS ACTION HERE.

23 NOW WE'RE BEFORE THE COURT AND IT SEEMS LIKE THE CASE IS
24 NOW ABOUT THE -- ABOUT ONE THING, THE IS_CHROME_INCOGNITO BIT,
25 MORE OR LESS.

1 I'M GOING TO GO THROUGH AND ADDRESS QUICKLY -- I THINK I
2 CAN DO IT BEFORE YOUR HONOR'S CRIMINAL MATTER -- ALL OF THE
3 POINTS THAT HAVE BEEN MADE HERE, BUT I WANTED TO NOTE THAT AT
4 THE OUTSET.

5 OUR VIEW HERE, YOUR HONOR, IS THAT AT WORST WHAT HAS
6 HAPPENED IN THIS CASE IS WHAT HAPPENS IN DISCOVERY IN ALL KINDS
7 OF COMPLEX CASES WITH LOTS AND LOTS OF DOCUMENTS AND LOTS OF
8 EVIDENCE, AND FRANKLY, OCCASIONALLY SHIFTING THEORIES WHERE ONE
9 DAY IT'S THE ZWIEBACK, ONE DAY IT'S SEARCH, ANOTHER DAY IT'S
10 THESE INCOGNITO BITS THAT ONE SIDE OR OTHER IS MOST INTERESTED
11 IN.

12 IT HAPPENS IN ORDINARY LITIGATION THAT SOMETIMES DOCUMENTS
13 DON'T -- AREN'T PRODUCED RIGHT AWAY, SOMETIMES DOCUMENTS COME
14 IN, A PARTY HAS TO GO BACK, ASK FOLLOW-UP QUESTIONS. IT HAS
15 HAPPENED IN THIS CASE ON BOTH SIDES.

16 BUT OF COURSE, IT'S MORE OF A ONE-WAY RATCHET IN A CLASS
17 ACTION WHERE YOU HAVE A COMPANY AND INDIVIDUALS, SO ALMOST ALL
18 OF THE DISCOVERY IS GOING THIS WAY.

19 WE HAVE BEEN VERY ABLY ASSISTED BY A SPECIAL MASTER WHO I
20 THINK AT EVERY TURN HAS SAID, ON THE RECORD, THAT THE PARTIES
21 ARE WORKING TOGETHER IN GOOD FAITH AND THAT SOMETIMES THERE ARE
22 THESE GLITCHES IN DISCOVERY.

23 LET ME MAKE ONE THING VERY CLEAR, BECAUSE I NOTICED IN THE
24 REPLY BRIEF FILED BY THE PLAINTIFFS, THEY SAID, TELLINGLY,
25 GOOGLE HAS NEVER STATED THAT ITS COUNSEL WAS UNAWARE OF THE

1 EXISTENCE OF THESE BITS.

2 I'M TELLING YOU, YOUR HONOR, AS AN OFFICER OF THE COURT,
3 WE WERE UNAWARE OF THE EXISTENCE OF THESE BITS WITH THESE
4 FIELDS AT THE RELEVANT TIMES THAT THE PLAINTIFFS HAVE BEEN
5 POINTING TO, CERTAINLY THE IS_CHROME_INCOGNITO MODE.

6 WE LEARNED ABOUT THIS AS THINGS WERE BEING PRODUCED,
7 SOMETIMES AFTER THINGS WERE BEING PRODUCED, BECAUSE HERE'S
8 ANOTHER THING THAT HAPPENS IN ORDINARY LITIGATION.

9 SOMETIMES A PARTY GETS A BUNCH OF DOCUMENTS AND IT TAKES
10 THEM AWHILE TO SIFT THROUGH AND FIND THE ONES THAT THEY'RE
11 INTERESTED IN AND WANT TO FOLLOW UP ON.

12 AND I CAN ASSURE YOU, YOUR HONOR, BECAUSE YOU HEARD IT
13 HERE EARLY IN THE CASE, IN A WAY, WE'RE KIND OF DARNED IF WE DO
14 AND DARNED IF WE DON'T. IF WE DON'T PRODUCE A LOT OF
15 DOCUMENTS, THE PLAINTIFFS ARE GOING TO COME AND SAY, YOUR
16 HONOR, WE'VE ONLY GOTTEN A HANDFUL OF DOCUMENTS FROM GOOGLE,
17 WHAT'S GOING ON HERE? AND IF WE PRODUCE A WHOLE BUNCH OF
18 DOCUMENTS, THE PARTIES -- THE PLAINTIFFS ARE GOING TO COME,
19 LIKE THEY DID JUST A FEW MINUTES AGO, AND SAY, WELL, WE GOT
20 840,000 DOCUMENTS, WHAT ARE WE SUPPOSED TO DO?

21 WHAT WE'RE SUPPOSED TO DO IS DO OUR BEST IN GOOD FAITH.
22 AND HONESTLY, THE PLAINTIFFS SHOULD HAVE ASKED, AS THEY DID
23 WITH THE SPECIAL MASTER, RAISING SOME OF THESE ISSUES, SAID YOU
24 KNOW WHAT, WE NEED SOME FOLLOW-UP HERE. WHAT CAN WE DO TO
25 WORKING TOGETHER ABOUT IT?

1 INSTEAD THERE'S THE RUSH TO SANCTIONS.

2 LET ME TELL YOU WHY THE BASIC CASE THAT THEY'VE MADE IS
3 NOT ACCURATE, AND MS. TREBICKA WILL TELL YOU WHY THE REMEDIES
4 THAT THEY ARE SEEKING ARE NOT WARRANTED.

5 THERE ARE FOUR RELEVANT QUESTIONS TODAY. MS. TREBICKA
6 HIGHLIGHTED THEM, OR PREVIEWED THEM IN HER OPENING. WAS THERE
7 CONCEALMENT? WAS THERE PREJUDICE?

8 DO WE HAVE OUR SLIDES?

9 MS. TREBICKA: YES. MS. FANTHORPE NEEDS TO CHANGE
10 THE OUTPUT.

11 THE CLERK: THANK YOU.

12 MR. SCHAPIRO: OKAY.

13 AND, YOUR HONOR, YOU HAVE THIS POWERPOINT PRESENTATION IN
14 YOUR BINDER. I THINK IT'S, UNFORTUNATELY, STAPLED OR CLIPPED
15 RATHER THAN WITH HOLES.

16 THE COURT: YEAH, THANK YOU. I'VE GOT IT.

17 MR. SCHAPIRO: SO THERE ARE FOUR RELEVANT QUESTIONS
18 THAT THE ANSWER -- THAT THE EVIDENCE WE THINK HAS ALREADY
19 ANSWERED, OR AFTER YOU HEAR FROM SOME WITNESSES WILL ANSWER
20 TODAY.

21 HAS THERE BEEN CONCEALMENT?

22 HAS THERE BEEN PREJUDICE?

23 ARE ANY OF THESE BITS AS IMPORTANT TO THE CASE AS THE
24 PLAINTIFFS SAY?

25 AND, FINALLY, SHOULD THERE BE SANCTIONS?

1 SO LET'S TAKE THEM ONE BY ONE.

2 CONCEALMENT.

3 SO THESE GOOGLE BITS WERE DISCLOSED LAST YEAR. GOOGLE
4 DISCLOSED THE [REDACTED] BITS -- LET ME TAKE THEM ONE AT A TIME.
5 THIS IS SORT OF A TABLE OF CONTENTS.

6 I'M GOING TO WALK THROUGH EACH OF THESE, BUT JUST VERY
7 BRIEFLY, WE DISCLOSED THE [REDACTED] BITS -- EXCUSE ME -- THE BITS
8 FROM WHAT WE ARE CALLING THE SEARCH, THE PREVIOUSLY IDENTIFIED
9 SEARCH LOGS IN JUNE 2021; THE MAYBE_CHROME_INCOGNITO BIT IN
10 SEPTEMBER 2021; WE PRODUCED INFORMATION ABOUT MR. LEUNG AND
11 MS. LIU AND THE WITNESSES WHO THE PLAINTIFFS HAVE CLAIMED DID
12 NOT TESTIFY TRUTHFULLY TESTIFIED ENTIRELY ACCURATELY.

13 FIRST, THE [REDACTED] BITS, JUNE 18TH, 2021. THIS DOCUMENT
14 WAS PRODUCED. I THINK WE'VE ALREADY JUST TALKED ABOUT IT A FEW
15 MINUTES AGO. YOU'VE SEEN THIS DOCUMENT. IT IS, I BELIEVE, OUR
16 EXHIBIT A AND THE PLAINTIFFS' EXHIBIT 109 ALREADY, ALREADY IN.

17 THE COURT: IN EVIDENCE, YES.

18 MR. SCHAPIRO: THE LONG AND SHORT OF THIS IS LAST
19 SUMMER, GOOGLE PRODUCED A DOCUMENT IDENTIFYING THE
20 IS_CHROME_NON_INCOGNITO BIT THAT WAS SENT, ONLY SENT IN SOME
21 PARTICULAR LOGS, THE LOGS ARE RELATING TO THE PREVIOUSLY
22 IDENTIFIED SEARCH LOGS.

23 PLAINTIFFS LATER CITED THIS DOCUMENT -- THEY CAN'T COME IN
24 AND SAY, WELL, BUT IT WAS JUST A DROP IN THE OCEAN, WE DIDN'T
25 SEE IT, BECAUSE THEY CITED IT IN THEIR RULE 30(B) (6) DEPOSITION

1 NOTICE REGARDING THE BIT.

2 ALSO ON JUNE 18TH, 2021, WE PRODUCED A DOCUMENT
3 IDENTIFYING THE PROJECT, WHAT WE'RE REFERRING TO HERE AS THE
4 PROJECT, THAT LED TO THE MAYBE_CHROME_INCOGNITO BIT.

5 NOW, THIS DOCUMENT DOESN'T ONLY IDENTIFY THE PROJECT LAST
6 SUMMER. IT IDENTIFIES MANDY LIU AS A PERSON WORKING ON THE
7 PRODUCT, AND IT INCLUDES COMMENTS FROM MS. LIU REGARDING THE
8 DETECTION OF INCOGNITO BY USE OF THE X-CLIENT DATA HEADER.

9 SO THIS IS ONE OF THE THINGS THAT, DESPITE HAVING HAD
10 THIS, THE PLAINTIFFS HAVE COME IN AND SAID THAT THE
11 FEBRUARY 18TH, 2022 PRODUCTION CONTAINS STUNNING REVELATIONS
12 REVEALING THAT SINCE JUNE OF 2020, THAT MR. LEUNG AND MS. LIU
13 HAD WORKED ON A PROJECT TO DO EXACTLY WHAT THIS DOCUMENT SAYS
14 THAT IT DOES.

15 SO THIS WAS NOT CONCEALED IN ANY WAY.

16 ON JULY 9TH OF 2021, AS I FORESHADOWED, THE PLAINTIFFS
17 DISCUSSED THESE VERY DOCUMENTS IN THEIR BRIEFING. SO I WANT TO
18 BE 100 PERCENT CLEAR. THESE WEREN'T STRAY DOCUMENTS THAT
19 SLIPPED THROUGH UNNOTICED OR THAT SOMEHOW WERE LOST IN A
20 DOCUMENT DUMP. THEY CITED THEM TO YOUR HONOR IN SUPPLEMENTAL
21 BRIEFING THAT YOU HAD REQUESTED REGARDING THE X-CLIENT DATA
22 HEADER, STATING THAT THEIR REQUEST FOR THIS DISCOVERY WAS
23 ALSO -- I'M QUOTING HERE FROM DOCKET NUMBER 217-4 -- STATING
24 THAT THEIR REQUEST FOR THIS DISCOVERY WAS "ALSO CONSISTENT WITH
25 THE NUMEROUS STATEMENTS BY GOOGLE EMPLOYEES EXPLAINING HOW

1 GOOGLE ITSELF USES THE X-CLIENT DATA HEADER TO IDENTIFY
2 INCOGNITO BROWSING."

3 THEY EVEN CITED MANDY LIU'S COMMENT REGARDING THE X-CLIENT
4 DATA HEADER AS SOMETHING THAT A GOOGLE EMPLOYEE WROTE.

5 SEPTEMBER 1ST OF LAST YEAR, WE PRODUCED DETAILED DESIGN,
6 ACTUALLY MORE THAN ONE, BUT WE PRODUCED DETAILED DESIGN
7 DOCUMENTS FOR THE MAYBE_CHROME_INCOGNITO BIT.

8 SO THESE DOCUMENTS SHOULD HAVE LEFT PLAINTIFFS AND THEIR
9 25 EXPERTS WHO HAVE SIGNED THE PROTECTIVE ORDER TO GET
10 PERMISSION TO VIEW OUR ATTORNEYS' EYES ONLY MATERIAL WITH ZERO
11 DOUBT ABOUT THE EXISTENCE AND IMPLEMENTATION OF THE PROJECT,
12 ABOUT ITS TECHNICAL AND FACTUAL UNDERPINNINGS, ABOUT THE ROLE
13 OF THE MAYBE_CHROME_INCOGNITO BIT, AND ITS RELIANCE ON
14 INFERENCES REGARDING THE ABSENCE OF THE X-CLIENT DATA HEADER.

15 AND WHO ARE THE LISTED AUTHORS FOR THESE DOCUMENTS?
16 BERT LEUNG, MANDY LIU.

17 WE CONTINUED TO PRODUCE DOCUMENTS ABOUT THE PROJECT
18 THROUGHOUT THE AUTUMN OF 2021, INCLUDING DOCUMENTS SHOWING THE
19 BIT AT VARIOUS STAGES OF THE PROJECT WERE APPROVED.

20 LET ME GRAB MY GLASSES HERE.

21 YOU SEE HERE THIS DOCUMENT HAS THE LGTM APPROVAL NOTE ON
22 IT.

23 AND A FEW MINUTES AGO, I DESCRIBED THIS AS THE INCREDIBLE
24 SHRINKING CASE, AND I WAS TALKING ABOUT A LOT OF THE CLAIMS
25 THAT YOU SAW IN THE OPENING BRIEFS.

1 ONE OF THE ONES THAT I THOUGHT DIDN'T REALLY HOLD WATER,
2 EVEN ON ITS OWN TERMS, WAS THIS CLAIM THAT, WELL, WE KNEW ABOUT
3 IT, BUT SINCE ONLY FOUR OUT OF FIVE APPROVERS HAD APPROVED IT,
4 WE DIDN'T THINK IT WAS WORTH FOLLOWING UP WITH A QUESTION.

5 I THINK THAT IS FACIALLY INCREDIBLE IN SCORCHED, OR WHAT
6 HAS BEEN SCORCHED EARTH LITIGATION SUCH AS THIS.

7 BUT EVEN THAT, ON ITS OWN TERMS, IS NOT ACCURATE, AND I
8 THINK IT CALLS INTO QUESTION THE ACCURACY OF SOME OF THE OTHER
9 THINGS THAT ARE SAID IN THIS BRIEF, BECAUSE IF YOU LOOK AT THE
10 ACTUAL DOCUMENT THAT THEY'RE CITING, EVERYONE WHO WAS
11 AUTHORIZED AS AN APPROVER APPROVED IT.

12 TAKE A LOOK AT THIS DOCUMENT HERE. ROLE: APPROVER.
13 APPROVED. ROLE: APPROVER. APPROVED. ROLE: APPROVER.
14 APPROVED. ROLE: APPROVER. APPROVED. AND THEN THE FINAL
15 PERSON IS A REVIEWER WHO REVIEWED.

16 SO FOUR OUT OF FOUR PEOPLE APPROVED THE DOCUMENTS FOR THE
17 MAYBE_CHROME_INCOGNITO BIT.

18 THIS SUGGESTION THAT THE -- IF ONLY, IF ONLY WE HAD
19 PRODUCED A DOCUMENT THAT HAD FIVE OUT OF FIVE, THEN THEY WOULD
20 HAVE CAUGHT ON AND ASKED THE FOLLOW-UP QUESTIONS THAT THEY
21 SHOULD HAVE ASKED, IT DOESN'T HOLD WATER, YOUR HONOR.

22 NOW, WE ALSO, IN THE FALL, PROVIDED EVIDENCE ABOUT THE
23 PREVIOUSLY IDENTIFIED SEARCH BITS, THE 2017 BITS.

24 IN OCTOBER OF LAST YEAR, 2021, WE PRODUCED A DESIGN
25 DOCUMENT SHOWING THE PROPOSAL TO LOG A BIT APPROXIMATING

1 INCOGNITO TRAFFIC IN THE PREVIOUSLY IDENTIFIED SEARCH LOGS.
2 YOU CAN SEE IT HERE.

3 SO NOW THAT TAKES US TO NOVEMBER OF LAST YEAR WHEN WE HAD
4 A HEARING AND SOME ARGUMENT ABOUT WHAT WAS THEN CALLED THE P16
5 DISPUTE ABOUT THE X-CLIENT DATA HEADER.

6 THE PLAINTIFFS THEMSELVES PREPARED, ACTUALLY PREPARED A
7 SLIDE CITING MANDY LIU'S STATEMENT ABOUT HOW THE CHROME
8 INCOGNITO MODE IS DETECTED FROM X CLIENT DATA HEADER.

9 THIS TIME IT WAS IN A SLIDE THAT WAS SENT TO THE COURT FOR
10 THE HEARING THAT LED TO THE NOVEMBER 12TH ORDER.

11 SO THERE'S BEEN NO WITHHOLDING -- IF WE WERE
12 WITHHOLDING -- YOU KNOW, SOMETIMES YOU'LL HEAR IN CRIMINAL
13 CASES, BOY, THIS GUY MUST HAVE BEEN THE WORST CONSPIRATOR IN
14 THE WORLD BECAUSE HE WAS SO OBVIOUS.

15 IF WE WERE TRYING TO CONCEAL DOCUMENTS HERE, THIS IS THE
16 MOST INEPT EFFORT TO CONCEAL THAT I THINK ANY JUDGE WILL EVER
17 HAVE SEEN.

18 SO THIS IDEA THAT WE FAILED TO DISCLOSE BERT LEUNG AND
19 MANDY LIU, AS YOU KNOW, JUST TO SUM UP, WE CITED STATEMENTS BY
20 MS. LIU TO THE COURT -- EXCUSE ME -- THE PLAINTIFFS CITED
21 STATEMENTS BY MS. LIU TO THE COURT MULTIPLE TIMES LAST YEAR.
22 THEY HAD DOCUMENTS IN HAND SHOWING THAT MR. LEUNG HAD AUTHORED
23 DESIGN DOCUMENTS RELATING TO THE PROJECT BACK IN SEPTEMBER.

24 THOSE DOCUMENTS, PLUS OUR STEADY PRODUCTION OF ADDITIONAL
25 DOCUMENTS THROUGH NOVEMBER, GAVE THEM AMPLE INFORMATION TO

1 EXPLORE THESE BITS IF THEY HAD WANTED.

2 BUT THERE'S -- SO THERE'S BEEN NO CONCEALMENT ON THE PART
3 OF GOOGLE.

4 PLAINTIFFS HAVE ALSO RAISED COMPLAINTS ABOUT THE, THE
5 SUBMISSION OF MR. GOLUEKE IN RESPONSE TO THIS COURT'S
6 NOVEMBER 12TH ORDER.

7 AND YOU WILL HEAR FROM MR. GOLUEKE ON THE STAND, AND YOU
8 CAN ASSESS HIS CREDIBILITY YOURSELF. HE IS A TRUTHFUL, HARD
9 WORKING PERSON WHO'S OUT THERE DOING THE BEST HE CAN.

10 THE COURT HAD ORDERED GOOGLE TO PROVIDE A DECLARATION
11 THAT, TO THE BEST OF ITS KNOWLEDGE, WE HAD PROVIDED A -- GOOGLE
12 HAD PROVIDED A COMPLETE LIST OF DATA SOURCES THAT CONTAINED
13 INFORMATION RELEVANT TO THE PLAINTIFFS' CLAIMS -- AND I'M
14 EMPHASIZING THAT LAST CLAUSE FOR A REASON -- AND THAT ALL OF
15 THE DATA RESPONSIVE TO THE NAMED PLAINTIFFS HAVE BEEN PRODUCED
16 FROM ALL SEARCHED DATA SOURCES IN THE RESPECTIVE PRIOR
17 SEARCHES. I'M EMPHASIZING THAT FOR A REASON AS WELL.

18 AND WHAT DID YOUR HONOR DO? YOUR HONOR, I THINK WISELY,
19 BROUGHT IN THE SPECIAL MASTER AND MR. SCHMIDT TO, IN YOUR OWN
20 WORDS, THE WORDS OF THE ORDER FROM NOVEMBER 12TH, TO BE AN
21 INTERMEDIARY THROUGHOUT EACH STEP OF GOOGLE'S PRODUCTION OF
22 DATA, TO, QUOTE, "EVALUATE THE RESULTS FOR CONTENT AND
23 COMPLIANCE WITH THIS ORDER."

24 AND YOU AUTHORIZED THE SPECIAL MASTER -- THIS, AGAIN, IS
25 IN THE WORDS OF YOUR ORDER -- TO TAKE ALL APPROPRIATE MEASURES

1 TO PERFORM HIS DUTIES FAIRLY AND EFFICIENTLY AND TO ENFORCE
2 THIS ORDER AS HE DEEMS APPROPRIATE, INCLUDING MODIFYING THIS
3 ORDER AND ISSUING FURTHER ORDERS.

4 IT IS AGAINST THAT BACKDROP THAT MR. GOLUEKE PROVIDED HIS
5 DECLARATION.

6 HOW DID HE DO IT? HE OBTAINED INFORMATION FROM MULTIPLE
7 GOOGLE ENGINEERS.

8 HE'S PUT IN A DECLARATION, BY THE WAY, IN CONNECTION WITH
9 THIS SANCTIONS HEARING AS WELL THAT I THINK YOU HAVE,
10 CONSULTING WITH MULTIPLE GOOGLE ENGINEERS AND GOOGLE PERSONNEL
11 WORKING ON AND IDENTIFYING -- WORKING ON IDENTIFYING AND
12 SEARCHING COMPLEX DATA SOURCES FOR THIS LITIGATION.

13 AND HIS DECLARATION ATTACHED A LIST OF THOSE DATA SOURCES
14 SPANNING NEARLY FOUR PAGES, THAT'S DOCKET 337-3; AND HE
15 RECEIVED A LIST OF PLAINTIFFS' DATA THAT HAD BEEN PRODUCED OR
16 WOULD BE PRODUCED SPANNING 20 PAGES.

17 NOW, ALTHOUGH THE PLAINTIFFS HAD DOCUMENTS IN HAND AT THAT
18 TIME IDENTIFYING THE IS_CHROME_NON_INCOGNITO BIT AND
19 IDENTIFYING THAT IT WAS STORED IN THE PREVIOUSLY IDENTIFIED
20 SEARCH LOG, THEY DIDN'T CHALLENGE HIS DECLARATION OR THE
21 EXHIBITS ATTACHED ON THE GROUND THAT THEY DIDN'T CONTAIN THOSE
22 LOGS, OR ON ANY OTHER GROUNDS AT THE TIME.

23 AND OBVIOUSLY MR. GOLUEKE DID NOT PURPORT TO SPEAK ABOUT
24 FUTURE SEARCHES THAT MIGHT HAPPEN.

25 I SAW A REFERENCE IN THE PLAINTIFFS' REPLY BRIEF SAYING,

1 OH, THERE'S SOME THINGS THAT WE -- THAT HAVEN'T YET HAPPENED
2 AND THEY'RE NOT MENTIONED IN HIS DECLARATION.

3 THE DECLARATION ASKED HIM TO TALK ABOUT PRIOR SEARCHES
4 THAT OCCURRED. THE DECLARATION WAS 100 PERCENT ACCURATE.

5 THE SPECIAL MASTER, CONSISTENT WITH YOUR HONOR'S ORDER
6 ALLOWING HIM TO MANAGE THE PROCESS, LIMITED PRODUCTION
7 INITIALLY TO THE 100 LARGEST FIELDS FOR WHAT ARE CALLED THE
8 [REDACTED] LOGS IN THIS CASE, AND YOU CAN FIND SOME OF THAT,
9 THERE'S -- WE HAVE A TRANSCRIPT. THERE'S A TRANSCRIPT OF THE
10 SPECIAL MASTER HEARING FROM MARCH 5TH, 2022, PAGE 67, AND WE
11 CITE IT IN OUR BRIEF.

12 NOW, THE PLAINTIFFS WOULD HAVE IT, I THINK, TRYING TO
13 FRAME EVERYTHING IN SINISTER TONES, THAT SOMEHOW THE REASON WE
14 REQUESTED TO LIMIT THE PRODUCTION TO THE 100 LARGEST FIELDS WAS
15 BECAUSE WE WERE INTENDING TO INCLUDE OR EXCLUDE CERTAIN,
16 CERTAIN FIELDS FROM PRODUCTION.

17 THAT'S NOT WHY IT HAPPENED AT ALL. THE LIMITATION WAS
18 DRIVEN BY THE CAPABILITIES OF SOMETHING CALLED THE LOG'S [REDACTED]
19 [REDACTED], THE LOG'S [REDACTED], WHICH IS A TOOL THAT GOOGLE
20 MAINTAINS IN THE ORDINARY COURSE OF BUSINESS THAT CAN
21 AUTOMATICALLY GENERATE A LIST OF THE LARGEST 100 FIELDS FROM A
22 [REDACTED] LOG.

23 SO IT WAS -- AFTER BACK AND FORTH WITH THE SPECIAL MASTER,
24 WE SAID, LOOK, IS THIS A WAY -- WE CAN'T GO AND SEARCH
25 THOUSANDS OF LOGS HERE. CAN WE -- WE HAVE THIS TOOL, THOUGH,

1 THAT ALLOWS US VERY QUICKLY TO PRODUCE THE 100 FIELDS.

2 WE DIDN'T SELECT WHAT THOSE 100 FIELDS WERE. WE DIDN'T --
3 THERE WERE NO MACHINATIONS. IT WAS, THIS IS THE ONE WHERE WE
4 CAN PUSH A BUTTON -- IT'S NOT AS SIMPLE AS PUSHING A BUTTON --
5 BUT THIS IS A SIMPLE TOOL THAT WILL PRODUCE THESE. CAN WE DO
6 THAT?

7 YES, WE CAN.

8 WE HAD ATTEMPTED AT ONE POINT TO OBTAIN ALL THE FIELDS,
9 WHICH AS THE SPECIAL MASTER RECORD WILL CONFIRM, TURNED OUT TO
10 BE A HUGE ENGINEERING TASK. WE DID MANAGE TO DO IT FOR SOME
11 LOGS.

12 BUT THE 100 FIELDS, WHICH IS RELEVANT, OF COURSE, TO THE
13 GOLUEKE DECLARATION, HAS THE BENIGN ORIGIN THAT I HAVE JUST
14 DESCRIBED.

15 I'D LIKE TO MOVE TO THE LIAO DEPOSITION NOW.

16 I JOIN MR. BOIES IN INVITING YOU TO READ THE RELEVANT
17 PAGES OF THE DEPOSITION, BECAUSE I THINK THERE'S ONLY ONE
18 CONCLUSION THAT ONE CAN DRAW FROM IT, AT LEAST AFTER THE
19 CONTEXT THAT I'M ABOUT TO PROVIDE, AND THAT'S --

20 THE COURT: LET ME -- MR. SCHAPIRO, THEN LET ME JUST
21 ADD TO THE REQUEST, LET ME HAVE THE DEFENDANTS' EMAIL ME
22 MR. LIAO'S DEPOSITION.

23 MR. SCHAPIRO: SAY THAT AGAIN.

24 THE COURT: EMAIL THE LIAO DEPOSITION TO ME --

25 MR. SCHAPIRO: WE WILL DO THAT.

1 THE COURT: -- IN ITS ENTIRETY AFTER THESE
2 PROCEEDINGS.

3 MR. SCHAPIRO: WE WILL DO THAT.

4 THE RELEVANT -- THE PAGES THAT I THINK ARE IN DISPUTE
5 HERE, AND I THINK THEY'RE THE SAME PAGES THAT MR. BOIES CITED,
6 ARE IN THE 130'S, AND THAT DEPOSITION TOOK PLACE ON
7 DECEMBER 3RD OF LAST YEAR.

8 SO IF YOU REMEMBER SOME OF THE POINTS THAT I MADE A LITTLE
9 BIT EARLIER TODAY, BY DECEMBER 3RD, 2021, THE PLAINTIFFS HAD
10 NUMEROUS DOCUMENTS, INCLUDING DESIGN DOCUMENTS, EMAIL
11 CORRESPONDENCE REGARDING THE MAYBE_CHROME_INCOGNITO BIT,
12 INCLUDING CORRESPONDENCE IN WHICH MR. LIAO HIMSELF SUGGESTS
13 THAT THE NAME OF THE BIT SHOULD BE CHANGED TO
14 MAYBE_CHROME_INCOGNITO TO BE MORE ACCURATE. THAT'S A DOCUMENT
15 THAT WAS PRODUCED TO THEM IN NOVEMBER.

16 PLAINTIFFS DID NOT ASK MR. LIAO A SINGLE QUESTION ABOUT
17 THE BIT.

18 AND LET ME TELL YOU, I THINK HIGHLY OF THE ABILITIES OF
19 OPPOSING COUNSEL, AND ANY GOOD LAWYER, BEFORE YOU DEPOSE A
20 WITNESS, YOU HAVE SOMEBODY RUN A SEARCH OF THAT PERSON'S
21 DOCUMENTS, WHAT ARE THE DOCUMENTS, ESPECIALLY THE DOCUMENTS
22 WE'VE RECENTLY RECEIVED ABOUT THIS PERSON, BECAUSE THOSE MIGHT
23 BE SOME THAT WE HAVEN'T FULLY ABSORBED.

24 SO THEY HAD THAT DOCUMENT. THEY CHOSE NOT TO ASK HIM
25 ABOUT IT.

1 BUT NOW THEY'RE PLACE OUTSIZED FOCUS ON CERTAIN ANSWERS
2 GIVEN MY MR. LIAO. BUT, YOUR HONOR, THIS IS A TRUISM, BUT
3 ANSWERS OCCUR IN RESPONSE TO QUESTIONS, AND ONCE YOU FOCUS ON
4 THE QUESTIONS, MR. LIAO'S ANSWERS NOT ONLY MAKE SENSE, BUT
5 THERE'S NO -- THERE'S NO WAY ANYONE COULD BE MISLED BY HIM, AND
6 IT WOULD HAVE BEEN MISLEADING FOR HIM TO ANSWER OTHERWISE.

7 WHAT WERE THE QUESTIONS THAT MR. LIAO WAS ASKED BY
8 MR. MAO?

9 AND WE HAVE THESE TRANSCRIPT EXCERPTS HERE WHERE WE'VE
10 HIGHLIGHTED SOME KEY PHRASES, BUT THIS IS IMPORTANT ENOUGH THAT
11 I THINK I WANT TO WALK THROUGH THEM ALL PRETTY QUICKLY.

12 MR. MAO ASKS MR. LIAO, "I BELIEVE YOU SAID THAT'S PARSING
13 WHETHER OR NOT THE INCOMING SIGNAL FROM THE EXTERNAL WORLD
14 CONTAINS A PRIVACY PREFERENCE OR SETTING OF SOME TYPE."

15 AND THEN HE SAYS, "AS FAR AS YOU'RE AWARE, AMONGST THESE
16 PRIVACY SIGNALS, IS THERE ONE FOR INCOGNITO MODE BROWSING ON
17 CHROME?"

18 NEXT QUESTION -- NOT NECESSARILY THE NEXT QUESTION, BUT
19 THE NEXT ON OUR SLIDE, "WHAT ABOUT A PARAMETER SPECIFICALLY TO
20 SIGNAL TO [REDACTED]" -- AND [REDACTED] MEANS [REDACTED] --

21 MS. TREBICKA: [REDACTED].

22 MR. SCHAPIRO: -- [REDACTED], WHICH IS
23 SOMETHING THROUGH WHICH THE MAYBE_CHROME_INCOGNITO BIT DOESN'T
24 TRAVEL.

25 "WHAT ABOUT PARAMETER SPECIFICALLY TO SIGNAL TO [REDACTED] TO

1 PARSE OUT THAT, OH, THIS IS INCOGNITO MODE TRAFFIC?"

2 ANOTHER QUESTION. "WERE YOU EVER INVOLVED IN ANY
3 DISCUSSION ON WHETHER OR NOT [REDACTED] SHOULD BE DESIGNED TO RECEIVE
4 AND PARSE SUCH A SIGNAL?"

5 "WAS THERE A DISCUSSION ON WHETHER OR NOT THAT SHOULD BE A
6 SIGNAL TO [REDACTED]? WHETHER OR NOT THAT DESIGN SHOULD INCLUDE, YOU
7 KNOW, A SIGNAL TO [REDACTED], SAYING THAT THE USER OR DEVICE WAS
8 BROWSING IN INCOGNITO MODE?"

9 "MY QUESTION TO YOU IS WHETHER OR NOT YOU'RE AWARE OF A
10 DISCUSSION OR PROPOSAL OF A NON-URL SIGNAL THAT WOULD BE SENT
11 TO [REDACTED]?"

12 YOUR HONOR, THE ABSENCE OF THE X-CLIENT DATA HEADER AND
13 THESE BITS THAT ARE BUILT UPON THE ABSENCE OF THE X-CLIENT DATA
14 HEADER ARE IN NO UNIVERSE A SIGNAL SENT FROM A BROWSER BACK TO
15 GOOGLE, LET ALONE A SIGNAL SPECIFICALLY SENT TO [REDACTED].

16 IT IS THE ABSENCE OF SOMETHING FROM WHICH SOMEONE MIGHT
17 INFER SOMETHING, AND YOU WILL SEE FROM MR. LIAO YOURSELF, HE IS
18 A WITNESS WHO LISTENS CAREFULLY TO THE QUESTIONS AND ANSWERS
19 THEM HONESTLY, AND HE WAS ASKED -- THE QUESTION ON WHICH THE
20 PLAINTIFFS HAD PLACED EMPHASIS WAS A QUESTION ABOUT, IS THERE
21 SUCH A SIGNAL IN THE CONTEXT OF ALL THESE QUESTIONS ABOUT THAT
22 TYPE OF SIGNAL?

23 NO, THERE ISN'T, WE'RE NOT DEVELOPING ONE.

24 SO THERE'S NO CONCEALMENT THERE.

25 AS I MENTIONED AT THE BEGINNING, THE FOCUS OF PLAINTIFFS'

1 CASE HAS SHIFTED A LITTLE BIT NOW TO WHAT WE'RE CALLING THE
2 PREVIOUSLY IDENTIFIED SEARCH LOGS.

3 WELL, THEY KNEW ENOUGH ABOUT THAT TO SERVE A RULE 30(B) (6)
4 NOTICE ON THE TOPIC ON DECEMBER 3RD OF LAST YEAR. THEY SENT A
5 30(B) (6) NOTICE ON THE IS_CHROME_NON_INCOGNITO MODE BIT IN
6 THOSE LOGS? IT CITED THE DOCUMENTS THAT -- ONE OF THE
7 DOCUMENTS I PREVIOUSLY SHOWED YOU FROM JUNE OF 2021.

8 AND DR. CAITLIN SADOWSKI, WHO YOU WILL HEAR FROM AS WELL
9 TODAY, TESTIFIED AS GOOGLE'S WITNESS ON THAT TOPIC ON
10 MARCH 10TH OF THIS YEAR.

11 THAT SUMS UP -- EXCUSE ME.

12 ALL OF THIS DEMONSTRATES THAT NOTHING WAS CONCEALED BY
13 GOOGLE. PLAINTIFFS HAD THE INFORMATION THAT THEY NOW SAY IS
14 SUDDENLY THE CENTER OF THEIR CASE, AND CERTAINLY NOTHING THAT
15 THE PLAINTIFFS HAVE IDENTIFIED OR THAT I HAVE WALKED THROUGH
16 INDICATES ANY TYPE OF BAD FAITH OR INTENTIONAL MISCONDUCT BY
17 GOOGLE OR BY ITS ATTORNEYS.

18 BUT THERE ALSO HAS BEEN NO PREJUDICE. THE PLAINTIFFS HAVE
19 NOW ALL THAT THEY CLAIM TO NEED.

20 I CAN GET THROUGH THESE NEXT COUPLE OF SLIDES PRETTY
21 QUICKLY BECAUSE I THINK YOU'VE SEEN SOME OF THIS.

22 THEY HAVE OBTAINED THE RELEVANT DOCUMENTS.

23 THEY HAVE OBTAINED THE RELEVANT TESTIMONY.

24 THEY HAVE NOT BEEN PREJUDICED IN THE SPECIAL MASTER
25 PROCESS.

1 THEY HAVE NOT BEEN PREJUDICED IN EXPERT DISCOVERY, NOR IN
2 THEIR ABILITY TO REBUT OUR CONTENTIONS.

3 LET'S TAKE A LOOK, QUICK LOOK AT THE FIRST ONE, RELEVANT
4 DOCUMENTS.

5 MANDY LIU AND BERT LEUNG HAVE BEEN MADE DOCUMENT
6 CUSTODIANS. WE'VE PRODUCED DOCUMENTS FROM THEIR CUSTODIAL
7 FILES AT AN ACCELERATED PACE. I THINK MS. TREBICKA MENTIONED
8 THIS. IT WAS SO ACCELERATED THAT WE HAD TO CLAW THEM BACK
9 BECAUSE WE WERE RUSHING THEM OUT THE DOOR.

10 PLAINTIFFS ALSO OBTAINED RELEVANT TESTIMONY. THEY DEPOSED
11 BERT LEUNG, THEY DEPOSED MANDY LIU, THEY DEPOSED
12 CAITLIN SADOWSKI ON THE TOPICS OF THE BITS THAT WE'RE HERE
13 DISCUSSING TODAY.

14 THEY HAVE NOT BEEN PREJUDICED IN THE SPECIAL MASTER
15 PROCESS. THEY PROVIDED THEIR FINAL SET OF SEARCHS TO THE
16 SPECIAL MASTER ON APRIL 14TH, SO THIS IS LONG AFTER THE
17 SUPPOSED BLOCKBUSTER REVELATIONS. THOSE SEARCH REQUESTS
18 INCLUDE ALL OF THE LOGS THAT CONTAIN THE
19 MAYBE_CHROME_INCOGNITO, THE IS_CHROME_NON_INCOGNITO, AND THE
20 IS_CHROME_INCOGNITO BITS.

21 I'LL REPEAT THAT. THE SEARCH REQUEST THAT THEY GAVE TO
22 THE SPECIAL MASTER ON APRIL 14TH INCLUDE ALL LOGS THAT CONTAIN
23 THESE THREE BITS.

24 WE ARE SEARCHING THOSE LOGS UNDER THE SPECIAL MASTER'S
25 GUIDANCE.

1 AND ALL OF THE LOGS THAT CONTAINED THE BITS AT ISSUE HAVE
2 BEEN INCLUDED IN THE SPECIAL MASTER'S PRESERVATION PROPOSAL.

3 WHEN OPPOSING COUNSEL WAS SUMMING UP A FEW MINUTES AGO,
4 YOU ASKED, WELL, IS THERE AN ASK? IS THERE SOMETHING ELSE THAT
5 YOU NEED?

6 AND IN OUR VIEW, IT'S TELLING THAT THE PLAINTIFFS REALLY
7 COULDN'T COME UP WITH ANYTHING ELSE THAT THEY SAY THEY NEED.

8 THEY HAVE CLAIMED THAT THEY'VE BEEN PREJUDICED IN EXPERT
9 DISCOVERY, BUT THEIR EXPERTS HAVE PARTICIPATED IN THE SPECIAL
10 MASTER HEARINGS, INCLUDING LIVE DEMONSTRATIONS WHERE, A MONTH
11 OR TWO AGO -- WHICH I THINK YOU HEARD FROM MR. THOMPSON ON THE
12 STAND -- THAT HE WAS ABLE TO DO SOME SEARCHES, OR LOOK OVER THE
13 SHOULDERS OF GOOGLE ENGINEERS AS THEY RAN SEARCHES RELATED TO
14 THE MAYBE_CHROME_INCOGNITO BIT, WHILE BEING QUESTIONED IN WHAT
15 I WOULD SAY WAS A SOMEWHAT IRREGULAR MANNER BY PLAINTIFFS'
16 EXPERTS, KIND OF AN INFORMAL DEPOSITION, SO THEY WERE ABLE TO
17 ASK WHATEVER QUESTIONS THEY WANTED.

18 AND AFTER THE SANCTIONS MOTION WAS FILED, WE NEGOTIATED AN
19 EXTENSION TO THE EXPERT SCHEDULE WITH THE PLAINTIFFS. THEY DID
20 NOT ASK US FOR MORE TIME.

21 FINALLY, YOUR HONOR, AT LEAST ON MY TOPICS HERE, FINALLY,
22 THE PLAINTIFFS HAVE NOT BEEN PREJUDICED IN THEIR ABILITY TO
23 REBUT WHATEVER CONTENTIONS THEY SAY THEY NEED TO REBUT.

24 THROUGH THE SPECIAL MASTER PROCESS, THE PLAINTIFFS HAVE
25 RECEIVED LITERALLY GIGABYTES OF DATA ASSOCIATED WITH THEIR OWN

1 AUTHENTICATED IDENTIFIERS. THEY'VE RECEIVED THE RESULTS OF
2 HUNDREDS -- EXCUSE ME -- OF SEARCHES FOR HUNDREDS OF
3 UNAUTHENTICATED IDENTIFIERS, AND AFTER THIS FINAL SET OF
4 SEARCHES IS COMPLETE, THEIR EXPERTS WILL HAVE EVEN MORE DATA.

5 SO WE WOULD SAY THAT AFTER DOZENS OF DEPOSITIONS, MILLIONS
6 OF PAGES OF PRODUCED DOCUMENTS, GETTING GIGABYTES OF USER DATA,
7 THEY HAVE A VAST AMOUNT OF INFORMATION.

8 IF THEY WANT TO ARGUE ABOUT IT, IF WE WANT TO HAVE
9 ARGUMENTS DOWN THE ROAD ABOUT WHETHER A CLASS IS OR ISN'T
10 ASCERTAINABLE, THAT'S GOING TO HAPPEN IN FRONT OF JUDGE ROGERS,
11 I ASSUME.

12 BUT WHATEVER ARGUMENTS THEY MAY WANT TO MAKE AND WHATEVER
13 ARGUMENTS WE MAY WANT TO MAKE, THEY CAN MAKE. THEY MAY SAY,
14 OH, GOOGLE, YOU THOUGHT THIS WAS RELIABLE BECAUSE YOU USED IT
15 IN SOME PROJECT OR SOME BITS. HAVE AT IT, THEY CAN MAKE IT.

16 WE WANT TO RESPOND, WELL, WAIT A MINUTE, THERE'S SOME
17 REASONS WHY IT'S, IT'S UNRELIABLE AND IT CAN'T DO WHAT YOU WANT
18 IT TO DO. THERE HAVE BEEN FULL DEPOSITIONS ABOUT THAT,
19 MULTIPLE DEPOSITIONS ABOUT THAT.

20 THEY ARE AT NO DISADVANTAGE.

21 THE FACT THAT THIS INFORMATION STILL MIGHT NOT BE ENOUGH
22 IN THEIR MIND TO REBUT OUR CONTENTIONS IS BECAUSE OUR
23 CONTENTIONS ARE CORRECT. THERE IS NO RELIABLE MEANS TO
24 IDENTIFY INCOGNITO TRAFFIC. THE DATA AT ISSUE IS NOT
25 MAINTAINED IN ANYTHING RESEMBLING A CRADLE-TO-GRAVE

1 COMPREHENSIVE PROFILE.

2 ONE MOMENT.

3 (DISCUSSION OFF THE RECORD BETWEEN DEFENSE COUNSEL.)

4 MR. SCHAPIRO: JUST ONE WORD ON THE SPECIAL MASTER
5 AND THEN MS. TREBICKA WILL BRIEFLY ADDRESS A POINT ABOUT THE
6 X-CLIENT DATA HEADER AND SANCTIONS.

7 DISCOVERY -- THE SPECIAL MASTER PROCESS HERE HAS BEEN
8 ROBUST. I DON'T NEED TO WALK YOU THROUGH THE NUMBERS ON THIS
9 SLIDE.

10 BUT SUFFICE IT TO SAY ALL OF US HERE -- AND THE FOLKS FROM
11 CALHOUN WHO ARE HERE AS WELL -- HAVE SPENT A GOOD DEAL OF TIME
12 WITH MR. BRUSH AND WITH MR. SCHMIDT, INCLUDING ON THE WEEKENDS
13 OR EVENINGS, AND I BELIEVE, AND I BELIEVE THE RECORD WILL
14 REFLECT, BOTH SIDES HAVE WORKED IN GOOD FAITH, BOTH SIDES HAVE
15 BEEN FRUSTRATED AT TIMES BECAUSE WE FEEL THE OTHER SIDE IS
16 BEING UNREASONABLE, AND WE HAVE WALKED THAT MIDDLE ROAD THAT
17 HAPPENS IN DISCOVERY IN AN ORDINARY CASE.

18 BUT THERE CAN BE NO DOUBT THAT THE PLAINTIFFS HAVE NOW HAD
19 AMPLE OPPORTUNITY TO ASK FOR AND RECEIVE WHATEVER THEY WANT.

20 AND IF WE WERE REALLY PLAYING GAMES AND HIDING THE BALL,
21 ESPECIALLY SINCE THIS ISSUE ABOUT THE, THESE BITS HAS BEEN ON
22 THE PLAINTIFFS' RADAR AT LEAST SINCE FEBRUARY, ALTHOUGH WE
23 ASSERT THAT THERE'S MORE, THAT THE SPECIAL MASTER WOULD HAVE
24 SAID SOMETHING ABOUT IT OR IMPOSED HIS OWN RULINGS.

25 IN ADDITION TO BEING ROBUST, THE PROCESS HAS BEEN

1 SUCCESSFUL. THE SLIDE HERE SPEAKS FOR ITSELF.

2 BUT WE CAN SEND YOU -- WE CAN SUBMIT, IF YOU WISH, SOME OF
3 THE TRANSCRIPTS -- WE STARTED AT SOME POINT HALFWAY THROUGH
4 RECORDING BY ZOOM SOME OF THESE HEARINGS AND THEN HAVING
5 TRANSCRIPTS MADE.

6 BUT THE SPECIAL MASTER HAS SAID -- THIS IS FROM THE
7 TRANSCRIPT OF FEBRUARY 16TH, 2022: "I MEAN WE HAVE TO ASSUME
8 THERE'S A GOOD FAITH EFFORT THAT GOOGLE HAS MADE SOME ATTEMPT
9 ON THE SEEMINGLY SIGNIFICANT MATTER TO USE THE TOOLS IDENTIFIED
10 TO SEARCH THE DATA IN A RESPONSIVE AND PRODUCTIVE WAY."

11 FROM THE FEBRUARY 25TH, 2022 TRANSCRIPT: "AGAIN, LET'S
12 NOT ALWAYS FRAME EVERYTHING AS IF THERE WAS SOME MALICE OR
13 TRYING TO HIDE THINGS. I MEAN, THIS IS A COMPLICATED ISSUE."
14 THAT WAS FEBRUARY 25TH.

15 OUR HEARING ON MARCH 5TH: "WHAT'S BEFORE ME, YES, YOU
16 HAVE -- BOTH SIDE HAVE WORKED TOGETHER."

17 THIS IS AFTER THE STUNNING REVELATIONS ABOUT THE BITS.

18 AND FROM A HEARING JUST MARCH 23RD: "LOOK, WE WOULDN'T BE
19 IN THIS PROCESS IF IT WAS EASY. I MEAN, THERE ARE COMPLEXITIES
20 TO THIS THAT WE'RE WORKING THROUGH AND I BELIEVE BOTH PARTIES
21 ARE DOING IN GOOD FAITH."

22 AND THAT'S WHERE I WANT TO CLOSE MY PORTION, YOUR HONOR,
23 BECAUSE THAT'S ALL THAT'S HAPPENED HERE. YOU HAVE PARTY --

24 THE COURT: LET ME ASK A COUPLE QUESTIONS,
25 MR. SCHAPIRO.

1 MR. SCHAPIRO: SURE.

2 THE COURT: IS GOOGLE -- IS IT CORRECT THAT GOOGLE
3 HAS NOT ANSWERED THE QUESTION AS TO WHETHER OR NOT THERE ARE
4 OTHER FIELDS THAT IDENTIFY INCOGNITO TRAFFIC?

5 MR. SCHAPIRO: I'M GOING TO NEED TO CONFER WITH
6 MR. ANSORGE. IT IS NOT A SIMPLE THING TO DO.

7 MS. TREBICKA: IT'S COMPLICATED. I CAN EXPLAIN,
8 BUT --

9 MR. SCHAPIRO: WE HAVE NOT, BECAUSE IT'S A DIFFICULT
10 THING TO DO, AS YOU WILL HEAR FROM SOME OF THE WITNESSES WHO
11 WILL BE TESTIFYING TODAY.

12 THE COURT: ALL RIGHT. SO THERE, AT LEAST IN THEORY,
13 COULD BE ADDITIONAL FIELDS --

14 MR. SCHAPIRO: YES.

15 THE COURT: -- THAT ARE, YOU KNOW, MAYBE INCOGNITO,
16 OF THAT ILK, THAT HAVE NOT YET BEEN IDENTIFIED.

17 MS. TREBICKA: IN THEORY, YOUR HONOR.

18 TO THE BEST OF OUR KNOWLEDGE, WITH THE DUE DILIGENCE THAT
19 WE'VE DONE, I DON'T BELIEVE SO.

20 BUT I'D LIKE ALSO TO POINT OUT THAT INCOGNITO IS NOT A
21 TERM THAT'S USED ONLY WITH RESPECT TO CHROME BROWSING. IT HAS
22 DIFFERENT USES WITHIN GOOGLE AS WELL. SO IT'S NOT A SIMPLE,
23 LET'S SEARCH FOR INCOGNITO AND IT'LL HIT ON ONLY RELEVANT
24 RESULTS.

25 MR. SCHAPIRO: FOR EXAMPLE, YOUTUBE INCOGNITO, ALL

1 KINDS OF OTHER SERVICES. AND SO -- BUT WE WANT TO BE CAREFUL,
2 TO THE BEST OF OUR KNOWLEDGE IS I THINK THE ANSWER.

3 BUT FINDING OURSELVES HERE AND BEING, YOU KNOW, KNOWING
4 WHAT -- IT'S VERY IMPORTANT TO BE ACCURATE.

5 THE COURT: AND OBVIOUSLY IT'S DISPUTED AS TO WHETHER
6 OR NOT ALL LOGS WITH THE FIELDS WE'VE BEEN TALKING ABOUT HAVE
7 BEEN PRODUCED, AND I KNOW PLAINTIFFS HAVE A VIEW THAT THEY HAVE
8 NOT.

9 WHEN YOU SAY ALL LOGS AS YOU'RE REFERENCING A COUPLE OF
10 SLIDES AGO, BEFORE THE SPECIAL MASTER, AND ALL OF THE LOGS WERE
11 IDENTIFIED, ARE WE TALKING ABOUT THE [REDACTED] LOGS?

12 MR. SCHAPIRO: SO I THINK WE'RE TALKING ABOUT LOGS
13 THAT ARE SEARCHED RATHER THAN LOGS THAT HAVE BEEN PRODUCED.
14 BUT, YES, THE [REDACTED] ARE INCLUDED.

15 MR. ANSORGE: AND THE [REDACTED] LOG AS WELL.

16 MR. SCHAPIRO: AND THE LOGS FROM THE ADDITIONAL --
17 FROM THE ARTIST FORMERLY KNOWN AS --

18 THE COURT: SO IT'S THE 5, THE [REDACTED] AND THE 5?

19 MR. SCHAPIRO: YES.

20 THE COURT: ALL RIGHT. THOSE ARE MY QUESTIONS.

21 MR. SCHAPIRO: THANK YOU, JUDGE.

22 MS. TREBICKA WILL NOW JUST ADDRESS TWO SHORTER ISSUES.

23 THE COURT: ALL RIGHT.

24 MS. FANTHORPE, I ASSUME NO WORD YET FROM THE JUDGE?

25 THE CLERK: I'M WATCHING.

1 THE COURT: OKAY.

2 MS. TREBICKA: THANK YOU, YOUR HONOR.

3 I'D LIKE TO PICK UP WITH THE THIRD ISSUE, WHICH IS THE
4 X-CLIENT DATA HEADER ISSUE AND WHETHER IT'S A RELIABLE
5 DETERMINATION OF INCOGNITO MODE.

6 I THINK BOTH SIDES AGREE THAT IT'S NOT AN ISSUE THAT WILL
7 CHANGE THE DETERMINATION HERE.

8 BUT AS I MENTIONED IN THE OPENING, IT IS AN ISSUE THAT
9 UNDERLIES BOTH THE CONCEALMENT ARGUMENT THAT PLAINTIFFS MAKE,
10 AS WELL AS THE PREJUDICE ARGUMENT THAT PLAINTIFFS MAKE.

11 AND IF WE CAN MOVE ON TO THE NEXT SLIDE, THE FACT THAT THE
12 X-CLIENT DATA HEADER CAN BE ABSENT FOR MULTIPLE REASONS AND,
13 THEREFORE, IS NOT RELIABLE TO INDICATE INCOGNITO MODE IS NOT
14 SOMETHING NEW. IT WAS DISCUSSED EXTENSIVELY IN THE JUNE 16TH
15 DEPOSITION OF GLENN BERNSTON, AND AT THE VERY LEAST THESE
16 EXCERPTS THAT WE HAVE CITED IN THE SLIDES ARE IN THE RECORD,
17 BUT WE ARE HAPPY TO INCLUDE THE FULL TESTIMONY OF DR. BERNSTON
18 INTO THE RECORD AS WELL.

19 THIS WAS THE SAME ISSUE THAT PLAINTIFFS FOCUSSED ON AND
20 PROVIDED FULL BRIEFING, INCLUDING SUPPLEMENTAL BRIEFING.

21 NOW, WITH RESPECT TO THE 2017 BITS, THE BITS FROM THE
22 IDENTIFIED GOOGLE SEARCH LOGS, IT'S THE SAME HEURISTIC
23 METHOD -- AND YOU'LL HEAR THE WITNESSES TALK ABOUT WHAT THAT IS
24 REALLY, IT'S A COMPUTER SCIENCE TERM -- BUT IT'S THE SAME
25 HEURISTIC METHOD THAT UNDERLIES IT.

1 YOU HEARD DR. THOMPSON ON THE STAND TRY TO SHED SOME DOUBT
2 ON IT.

3 BUT DR. SADOWSKI, OUR 30(B) (6) WITNESS AND A CHROME
4 ENGINEER, AN EXPERT ON THIS, HAS ACTUALLY TESTIFIED AS TO THIS
5 HEURISTIC. SHE HAS LOOKED AT THE UNDERLYING CODE, AGAIN, IN
6 PREPARATION FOR THE HEARING, SO SHE CAN PROVIDE PROPER
7 TESTIMONY TO YOUR HONOR, AND THE SAME HEURISTIC METHOD, WHICH
8 IS THE ABSENCE OF THE X-CLIENT DATA HEADER, UNDERLIES BOTH
9 BITS.

10 AND LET ME JUST UNPACK THAT A LITTLE BIT. THE SAME METHOD
11 UNDERLIES THE FIRST BIT, THE IS_CHROME_NON_INCOGNITO BIT. SO
12 IF THE X-CLIENT DATA HEADER IS PRESENT, THAT MEANS THAT IT'S A
13 CHROME COMMUNICATION BECAUSE IT'S ONLY SENT IN CHROME, AND IT'S
14 NOT INCOGNITO.

15 THE SECOND BIT, THE IS_CHROME_INCOGNITO, IS ACTUALLY
16 DERIVED FROM THE FIRST BIT, AND DR. SADOWSKI CAN TESTIFY TO
17 THAT, AND SHE HAS IN DEPOSITION, WHICH WE'VE ALSO INCLUDED IN
18 THE RECORD.

19 IT'S THE FIRST BIT, TOGETHER WITH AN ADDITIONAL INPUT, OR
20 SIGNAL, WHICH IS THE USER AGENT.

21 SO IF THE FIRST BIT IS SET TO FALSE, AND THE USER AGENT
22 INDICATES CHROME, THEN THE SECOND BIT WILL BE TRUE. CHROME IS
23 IN INCOGNITO.

24 THOSE NAMES, I UNDERSTAND THEY LOOK RELIABLE OR
25 DEFINITIVE, BUT THE SAME UNDERLYING HEURISTIC UNDERLIES THOSE

1 BITS AS WELL. BOTH WERE CREATED BY A TEAM THAT PROVIDED
2 GEOLOCATION INFORMATION TO VARIOUS PARTS OF GOOGLE.

3 THESE LOGS IN WHICH THE BITS WERE FOUND RELATED ONLY TO
4 GOOGLE SEARCH. AND, AGAIN, THAT IS IN THE RECORD.

5 IF WE CAN MOVE TO THE NEXT SLIDE -- OH, ACTUALLY, I
6 APOLOGIZE, YES, TO -- YES, YOU FOUND THE RIGHT SLIDE. THANK
7 YOU, SETH.

8 SO THE SADOWSKI DEPOSITION TESTIMONY ACTUALLY CONFIRMS
9 THAT THAT IS THE CASE.

10 THERE'S BEEN THIS ISSUE OF THERE'S NOTHING IN THE RECORD,
11 OR THERE'S VERY LITTLE IN THE RECORD ABOUT THE 2017 BITS, AND
12 I'D LIKE TO ADDRESS IT AGAIN.

13 AND REALLY THE, THE SAME PROBLEM, OR THE SAME ISSUE, THE
14 SAME EXPLANATION FOR WHY THERE'S VERY LITTLE IN THE DISCOVERY
15 RECORD ON THESE BITS, AS I EXPLAINED IN THE BEGINNING, WHICH IS
16 THAT IT IS TIED TO THE CLASS DEFINITION.

17 THE CLASS DEFINITION, THAT WAS THE OPERATIVE CLASS
18 DEFINITION FOR MOST OF THE DISCOVERY PERIOD REALLY RELATED TO
19 GOOGLE AD MANAGER AND GOOGLE ANALYTICS, AND WE'VE PUT UP THE
20 CLASS DEFINITION ON THE SLIDE.

21 THAT IS THE REASON THAT THE BITS FROM THE -- THE 2017 BITS
22 FROM THE IDENTIFIED LOGS WERE, AND I BELIEVE CONTINUE TO BE,
23 ENTIRELY OUTSIDE OF THE SCOPE OF THIS CASE.

24 THERE IS NO REASON THAT WE WOULD HAVE LOOKED TO FIND THESE
25 BITS ANYWHERE, OR THAT WE HAD ANY REASON TO BELIEVE THAT THEY

1 WOULD HAVE BEEN HELPFUL TO PLAINTIFFS GIVEN THE FACT THAT THEY
2 WERE OUTSIDE OF, OUTSIDE OF THE SCOPE OF DISCOVERY.

3 WE CAN MOVE ON TO SANCTIONS NOW, YOUR HONOR, AND I HAVE TO
4 APOLOGIZE BECAUSE MY PREPARATION TO ADDRESS SANCTIONS WAS
5 REALLY ON THE BASIS OF THE SANCTIONS OR REMEDIES THAT WE
6 UNDERSTOOD PLAINTIFFS WERE SEEKING.

7 IT'S CHANGED A LITTLE BIT, BUT I DO AGREE WITH
8 MS. ANDERSON THAT THE LAW UNDERLYING THE SANCTIONS SOUGHT IS
9 REALLY THE SAME.

10 AND THERE'S ONLY TWO CASES THAT PLAINTIFFS HAVE CITED
11 WHERE THE COURT ORDERED ISSUE PRECLUSION FOR DISCOVERY
12 VIOLATIONS, AND IN BOTH CASES, DEFENDANT PROVIDED NO DISCOVERY
13 ON THE RELEVANT TOPIC, ZERO DISCOVERY, DESPITE THERE BEING
14 REPEATED ORDERS BY THE COURT, AND DESPITE BEING FOREWARNED BY
15 THE COURT.

16 IN FACT, PRECLUSION SANCTIONS -- IN FACT, PRECLUSION
17 SANCTIONS ARE SO SEVERE AS TO BE RARELY IMPOSED, AND THEY'RE
18 ONLY RESERVED FOR DISCOVERY ABUSES THAT ARE EXTREME AND
19 PREJUDICIAL.

20 WE DON'T HAVE THAT HERE. THERE HAS BEEN NO PREJUDICE, AND
21 THERE ARE LESSER REMEDIES.

22 THE ADDITIONAL ISSUE WITH PRECLUSION SANCTIONS IN THIS
23 CASE IS THE FACT THAT THEY ARE MEANT TO PUNISH -- TO PUNISH
24 GOOGLE. BUT, IN FACT, THEY WILL PUNISH THE CLASS AND THE COURT
25 BECAUSE THEY WILL LEAD TO A CLASS THAT IS UNMANAGEABLE, AND

1 THEY WILL ALSO MEAN THAT THAT -- THOSE SAME CLASS MEMBERS,
2 THEIR SHARE OF WHATEVER REMEDY THERE MAY BE FOR THE CLASS WILL
3 BE DILUTED BECAUSE THE BIT IS UNRELIABLE AND, THEREFORE, IT
4 WILL INCLUDE MANY OTHER MEMBERS IN THE CLASS THAN ACTUALLY
5 DESERVE TO BE IN THE CLASS.

6 AT THE END OF THE DAY, THE -- ONE OF THE PRIMARY ISSUES
7 THAT COURTS LOOK AT FOR PURPOSES OF ANY TYPE OF SANCTIONS IS
8 WHETHER THERE HAS BEEN BAD FAITH.

9 HERE THERE HAS BEEN NO BAD FAITH. THERE HAS BEEN
10 ABSOLUTELY NO BAD FAITH, IN PART BECAUSE WE DIDN'T EVEN KNOW
11 THAT THE BIT EXISTED, WE WEREN'T TRYING TO HIDE IT. AND ALSO
12 BECAUSE THERE IS -- BECAUSE THE EVIDENCE THAT IS IN THE RECORD
13 THAT WE HAVE PRODUCED A YEAR AGO IN 2021 IS INCONSISTENT WITH
14 AN INTENT TO HIDE.

15 WE HAVE A SLIDE HERE, YOUR HONOR, WITH THE CASE LAW AND
16 THE -- WHAT COURTS HAVE DONE BEFORE WITH REQUESTS FOR
17 PRECLUSION SANCTIONS.

18 AND WHAT WE'VE SEEN IS NOT ONLY THAT THE TWO CASES THAT
19 PLAINTIFFS FIND -- FOUND AND HAVE CITED, AND WE BASICALLY
20 HAVEN'T FOUND ANY MORE, THAT HAVE ORDERED PRECLUSION SANCTIONS
21 WHERE THE FACTS WERE VERY, VERY DIFFERENT FROM WHAT THEY ARE
22 HERE.

23 BUT WE'VE ALSO FOUND THAT EVEN WHERE COURTS HAVE DENIED
24 PRECLUSION SANCTIONS, THE CONDUCT HAS BEEN MUCH, MUCH WORSE
25 THAN WHAT EVEN THE ALLEGATIONS ARE HERE ABOUT GOOGLE'S CONDUCT.

1 PLAINTIFFS' REPLY REALLY DOESN'T GRAPPLE WITH THE CASE
2 LAW. IT TRIES TO SWEEP OUR CASES UNDER THE RUG BY CLAIMING
3 THAT THEY WERE CASES CONCERNING TERMINATING SANCTIONS AND ARE,
4 THEREFORE, SIMPLY OFF POINT.

5 BUT THAT'S NOT ACCURATE BECAUSE THE AUTHORITY THAT WE CITE
6 IS AUTHORITY THAT DEALT WITH THE ISSUE PRECLUSION -- WITH THE
7 EVIDENCE PRECLUSION SANCTIONS AT THE SAME -- IN THE SAME
8 OPINION, IT ALSO DEALT WITH TERMINATING SANCTIONS.

9 ALL OF THE PLACES THAT WE CITE, ALL OF THE PIN CITES OF
10 OUR CASES ARE TO THE EVIDENCE PRECLUSION SANCTIONS. WE DON'T
11 CITE LAW THAT DEALS WITH TERMINATING SANCTIONS.

12 A FEW OTHER THINGS ARE VERY IMPORTANT TO, TO NOTICE IN THE
13 AUTHORITY, OR WHAT'S ABSENT IN THE AUTHORITY THAT PLAINTIFFS
14 CITE.

15 THEY HAVE CITED NO CASES IN WHICH A COURT HAS GRANTED
16 PRECLUSIVE SANCTIONS IN THE FORM OF FINDING A CLASS
17 ASCERTAINABLE.

18 THE ONLY CASES THAT THEY COULD FIND ARE WHERE THE OTHER
19 SIDE OR THE SANCTIONED PARTY PROVIDED NO DISCOVERY ON THE
20 RELEVANT ISSUE AT ALL, DESPITE FOREWARNING BY THE COURT.

21 WHAT WE'VE ALSO FOUND IN THE CASE LAW, YOUR HONOR, IS THAT
22 THE EVIDENCE PRECLUSION SUMMARY ADJUDICATIONS NEARLY ALWAYS
23 PERMIT THE SANCTIONED PARTY TO RELY ON EVIDENCE THAT WAS TIMELY
24 PRODUCED, AND THAT IS ALSO INCONSISTENT WITH THE RELIEF THAT
25 PLAINTIFFS SEEK.

1 JURY INSTRUCTIONS, YOUR HONOR, ARE LIKEWISE PREJUDICIAL
2 AND IRRELEVANT. AND, AGAIN, HERE THE JURY INSTRUCTIONS THAT
3 PLAINTIFFS SEEK ARE CHANGING.

4 BUT AT THE HEART OF IT, NOT ONLY IS IT ONE OF THE MOST
5 SEVERE SANCTIONS THAT SHOULD NOT BE IMPOSED CASUALLY, BUT ALSO
6 THERE'S TWO ADDITIONAL ISSUES WITH IT.

7 FIRST IS THAT IT WOULD BE INACCURATE. GOOGLE DID NOT HIDE
8 EVIDENCE. IT IS INACCURATE TO SUGGEST TO THE JURY THAT WE DID.

9 BUT SECOND, IT IS AN INSTRUCTION THAT GOES TO EVIDENCE
10 THAT THE JURY WOULD EVEN HAVE NO OCCASION TO RELY ON, OR TO
11 VIEW OR TO CONSIDER FOR THE DETERMINATIONS THAT IT WOULD BE
12 MAKING.

13 IT'S IN EVIDENCE, THAT'S ONLY -- IT'S EVIDENCE THAT'S
14 ONLY -- THAT SHOULD ONLY BE RELEVANT TO A JUDGE'S DETERMINATION
15 AS TO CLASS CERT.

16 AND FINALLY, YOUR HONOR, PLAINTIFFS' REIMBURSEMENT REQUEST
17 IS ALSO IMPROPER BECAUSE IT IS SEEKING FOR THE REIMBURSEMENT OF
18 FEES OVER THE ENTIRETY OF THE SPECIAL MASTER PROCESS, WHICH --
19 AND THE, EVEN THE ALLEGATIONS ABOUT GOOGLE'S PURPORTED
20 MISCONDUCT GO ONLY TO A SMALL PART OF THE SPECIAL MASTER
21 PROCESS.

22 I WOULD LIKE TO POINT OUT TWO ADDITIONAL THINGS, YOUR
23 HONOR, AND THIS IS NOT IN THE SLIDES, BUT PLAINTIFFS PUT UP
24 THREE EMAILS THAT WERE -- THAT HAD BEEN ON OUR PRIVILEGED LOG
25 AND THEY WERE EMAILS BETWEEN ONE OF OUR ATTORNEYS AND

1 MR. LEUNG, MR. BERT LEUNG.

2 THE IMPLICATION FROM PLAINTIFFS' ARGUMENT WAS THAT GOOGLE
3 HAD KNOWN AT THE TIME OF THOSE EMAILS THAT THE
4 MAYBE_CHROME_INCOGNITO BIT, AT THE VERY LEAST, EXISTED.

5 THAT IS ABSOLUTELY FALSE. MR. BERT LEUNG'S WORK INVOLVES
6 SO MUCH MORE THAN THE MAYBE_CHROME_INCOGNITO BIT. IN FACT, IT
7 INVOLVES, AS I ALLUDED TO EARLIER IN MY OPENING, SOME OF THE
8 CRUCIAL INFRASTRUCTURE OF GOOGLE TO KEEP AUTHENTICATED AND
9 UNAUTHENTICATED DATA SEPARATE, AND YOU WILL HEAR FROM MR. LEUNG
10 HIMSELF TODAY.

11 WE ARE -- WE OFFER, YOUR HONOR, TO PROVIDE THOSE DOCUMENTS
12 TO YOU FOR REVIEW IN CAMERA, BECAUSE THEY'RE PRIVILEGED
13 DOCUMENTS, TO UNDERScore THE FACT THAT THEY ARE NOT WHAT
14 PLAINTIFFS WOULD LIKE THEM TO BE.

15 THE COURT: ALL RIGHT.

16 YOU HAD ANOTHER POINT?

17 MS. TREBICKA: I DID, YOUR HONOR.

18 IF WE COULD -- IF WE COULD GO BACK TO THE REMEDY THAT --
19 YOUR HONOR MADE A VERY POINTED QUESTION TO PLAINTIFFS' COUNSEL,
20 WHICH IS, WELL, WHAT IS IT YOU WANT? HOW CAN WE REMEDY THE
21 SITUATION?

22 AND THERE WAS A LOT OF RESPONSES, BUT REALLY IT BOILED
23 DOWN TO, I THINK, WHAT WAS THE REAL ASK WAS ALL OF THE
24 DOCUMENTS AND DATA THAT RELATE TO THESE BITS.

25 WE ALL KNOW THAT'S NOT HOW DISCOVERY GOES. YOU CAN'T ASK

1 FOR ALL DOCUMENTS AND DATA THAT RELATE TO A PARTICULAR WHATEVER
2 ISSUE, CONCEPT.

3 WHAT YOU DO IS WHAT WE'VE DONE IN THIS CASE, IDENTIFY
4 CUSTODIANS, IDENTIFY SEARCH TERMS, YOU RUN THOSE, AND WE HAVE A
5 LOT OF CUSTODIANS AND SEARCH TERMS IN THIS CASE, AND THAT IS
6 THE PROPER WAY TO ARRIVE AT RELEVANT DOCUMENTS.

7 SO TO THE EXTENT THAT THE ONLY ASK THAT PLAINTIFFS MAKE
8 RELATES TO THE DOCUMENTS AND DATA THAT'S RELATED TO THESE BITS,
9 WHATEVER THOSE BITS ARE, I BELIEVE THAT THE APPROPRIATE WAY TO
10 RESOLVE IT IS TO ORDER A SEARCH ON THE BASIS OF CERTAIN
11 CUSTODIANS AND CERTAIN SEARCH TERMS SO THAT PLAINTIFFS HAVE THE
12 DOCUMENTS THAT THEY BELIEVE THEY MAY NEED.

13 THAT'S IT, YOUR HONOR.

14 THE COURT: THANK YOU, MS. TREBICKA.

15 HOW WE DOING, MS. FANTHORPE?

16 THE CLERK: I'M NOT SURE.

17 THE COURT: OKAY. WELL, THEY'RE GOING TO CALL US.

18 MS. TREBICKA: YOUR HONOR, YES, I WANTED TO EXPLAIN,
19 I SHOULD HAVE SAID THERE'S THREE THINGS.

20 WE HAVE FOUR WITNESSES THAT WE WOULD LIKE TO CALL.

21 THE COURT: YES. SO WE'RE COMING TO THAT.

22 MS. TREBICKA: OKAY.

23 THE COURT: OKAY. SO AS I --

24 THE CLERK: THEY'RE ON THE SECOND MATTER, BUT I DON'T
25 KNOW HOW MUCH LONGER.

1 THE COURT: OKAY. THAT'S FINE. THAT'S FINE.

2 WE ARE GOING TO KEEP GOING, BUT WHEN WE GET THE HIGH SIGN
3 FROM THE JAIL, I HAVE TO LEAVE RIGHT THEN TO DEAL WITH A
4 CRIMINAL MATTER, WHICH I WILL ESTIMATE IT'LL TAKE ABOUT 30
5 MINUTES, SO WE WILL TAKE A 30 MINUTE RECESS.

6 THAT DOESN'T LEAVE US A LOT OF TIME.

7 I THINK THAT THE PRESENTATIONS SO FAR ON BOTH SIDES HAVE
8 BEEN VERY HELPFUL. AS I SAY, I DID GET THROUGH THE SUBMISSIONS
9 OF THE PARTIES, AND IN PARTICULAR THE PROPOSED FINDINGS, AND
10 LOOKED AT THE EXHIBITS THAT SUPPORT THOSE. I FOUND THAT VERY
11 HELPFUL, AND TODAY'S PRESENTATIONS SO FAR HAVE LARGELY TRACKED
12 THAT, AND THAT HAS BEEN HELPFUL.

13 AND OF COURSE WE HAD A FULL BACK AND FORTH WITH
14 MR. THOMPSON AS WELL.

15 SO I TOLD BOTH SIDES THEY WOULD HAVE AN OPPORTUNITY TO
16 CALL THEIR WITNESSES, AND OF COURSE THERE'S AN OPPORTUNITY TO
17 CROSS-EXAMINE, BUT I AM CONCERNED ABOUT TIME.

18 WE DO HAVE TO FINISH THESE PROCEEDINGS TODAY, AND WE HAVE
19 TO FINISH BY 4:30, AND AT LEAST 30 MINUTES OF THAT TIME I HAVE
20 TO BE ON ANOTHER MATTER.

21 SO I CAN -- NOW WE CAN SET TIME LIMITS. WE CAN LIMIT, YOU
22 KNOW, CROSS CAN'T EXCEED DIRECT IN TIME.

23 I DON'T KNOW IF YOU STILL FEEL THE NEED TO CALL ALL FOUR
24 WITNESSES.

25 BUT IF YOU WANT TO, I WILL GIVE YOU THAT OPTION.

1 MR. SCHAPIRO: I THINK WE MIGHT WANT A MINUTE TO
2 DISCUSS THAT, YOUR HONOR.

3 THE COURT: ABSOLUTELY.

4 MR. SCHAPIRO: WE'RE CERTAINLY ALSO OPEN TO TIME
5 LIMITS, MAYBE -- I DON'T KNOW, I HAVEN'T ADDED UP THE NUMBERS,
6 BUT IF WE HAD TEN MINUTES AND TEN MINUTES FOR EACH WITNESS SUCH
7 THAT THAT ENDS UP BEING 80 MINUTES, I GUESS, AND I DON'T KNOW
8 IF -- I KNOW YOU HAD ANTICIPATING CLOSINGS, BUT MAYBE THEY
9 COULD BE SHORT BECAUSE THESE HYBRIDS THAT WE'VE JUST DONE HAVE
10 BEEN --

11 THE COURT: HAVE BEEN QUITE THOROUGH.

12 MR. SCHAPIRO: SO I THINK A LOT OF IT MIGHT BE
13 REPETITIVE. WE'LL SEE. COULD WE HAVE ONE MINUTE?

14 THE COURT: SURE.

15 MR. SCHAPIRO: WE CERTAINLY WANT TO PUT ON SOME
16 WITNESSES, AND WE ALSO WOULD NEED TO GET THEM DOWNSTAIRS.

17 THE COURT: THAT'S FINE.

18 MR. SCHAPIRO: SO CAN WE TAKE A FIVE MINUTE BREAK,
19 AND WHEN WE COME BACK WE WILL, I'M SURE, HAVE A FIRST WITNESS,
20 AND WE'LL BE ABLE TO TELL YOU WHETHER THERE'S ANYONE WE CAN
21 CUT.

22 THE COURT: OKAY. I THINK THAT WOULD BE HELPFUL TO
23 CONFER. IF YOU'RE GOING TO CUT ANYONE, I WANT YOU TO LET
24 PLAINTIFFS KNOW, BECAUSE THEY WERE COUNTING ON SOME OF THOSE
25 PEOPLE BEING HERE.

1 BUT I -- THAT GOES FOR PLAINTIFFS, TOO. I DON'T THINK I
2 NEED TO HEAR FROM ALL FOUR WITNESSES ON EITHER DIRECT OR CROSS.
3 AGAIN, THE PRESENTATIONS HAVE BEEN QUITE THOROUGH. THE RECORD
4 IS VERY WELL DEVELOPED.

5 I UNDERSTAND EVERYONE WANTS A CHANCE TO MAKE THEIR POINTS,
6 AND WE WILL PROCEED, BUT --

7 MR. SCHAPIRO: COULD WE MAKE IT TEN MINUTES THEN,
8 BECAUSE THAT MIGHT ALLOW US TO ACTUALLY GET COMFORTABLE CUTTING
9 SOMEONE. OR WE'LL DO FIVE, YOUR HONOR.

10 THE COURT: OKAY. LET'S START WITH FIVE AND GET AS
11 MUCH -- MAKE IT AS PRODUCTIVE AS YOU CAN.

12 ALL RIGHT. WE'LL TAKE A SHORT BREAK. MS. FANTHORPE WILL
13 LET YOU KNOW IF MY CRIMINAL MATTER CALLS ME DURING THIS RECESS.

14 (RECESS FROM 2:33 P.M. UNTIL 3:22 P.M.)

15 THE COURT: ALL RIGHT. WHERE ARE WE WITH REGARD TO
16 WITNESSES, MR. SCHAPIRO?

17 MR. SCHAPIRO: YOUR HONOR, THERE WAS ONE WITNESS THAT
18 WE WERE WILLING TO CUT, MR. GOLUEKE. WE PROPOSED THAT TO THE
19 PLAINTIFFS. THE PLAINTIFFS HAVE SAID THEY WANT TO HAVE HIM AS
20 A WITNESS.

21 THE COURT: OKAY.

22 MR. SCHAPIRO: SO I THINK WE -- WE'LL GO WITH OUR
23 FOUR WITNESSES BECAUSE THERE'S NO ONE ELSE WE WOULD BE
24 COMFORTABLE CUTTING.

25 THE COURT: ALL RIGHT.

1 MR. SCHAPIRO: WE ARE MORE THAN HAPPY TO HAVE TIME
2 LIMITS, AND I WOULD PROPOSE, GIVEN WHAT YOUR HONOR SAID ABOUT
3 WHEN YOU WANT TO FINISH, TEN MINUTES FOR DIRECT AND TEN MINUTES
4 FOR CROSS. THAT ADDS UP TO JUST UNDER AN HOUR AND A HALF.

5 THE COURT: I THINK WE CAN DO THAT.

6 MR. SCHAPIRO: SO 80 MINUTES WITH WHATEVER
7 TRANSACTION -- WHAT CROSS THERE MIGHT IN THERE. BUT I LEAVE IT
8 TO YOU.

9 THE COURT: ALL RIGHT. THEN THAT'S WHAT WE'LL DO.
10 CALL YOUR FIRST WITNESS.

11 MR. SCHAPIRO: ALL RIGHT. I WILL -- SETH, CAN YOU
12 GET THEM.

13 (PAUSE IN PROCEEDINGS.)

14 MS. TREBICKA: YOUR HONOR, WE HAVE GIVEN WORD TO THE
15 WITNESS, IT'S JUST THAT THE RECEPTION MAY NOT HAVE BEEN THAT
16 GREAT, SO NOW WE SENT SOMEONE PHYSICALLY.

17 THE COURT: OKAY.

18 MS. TREBICKA: THE WITNESS IS IN THE ATTORNEY LOUNGE.

19 THE COURT: OKAY. WHO IS GOING TO BE THE WITNESS?

20 MS. TREBICKA: CHRIS LIAO.

21 MR. SCHAPIRO: WOULD IT BE OKAY WHILE WE'RE HERE IF I
22 RAISE A PURELY SCHEDULING ISSUE RELATING TO BOTH CASES, BROWN
23 AND CALHOUN?

24 THE COURT: OKAY.

25 MR. SCHAPIRO: I DON'T THINK WE NEED TO BE ON THE

1 RECORD, IF THAT'S OKAY WITH YOUR HONOR.

2 THE COURT: WE CAN GO OFF THE RECORD. THANK YOU.

3 (DISCUSSION OFF THE RECORD BETWEEN THE COURT AND COUNSEL.)

4 THE COURT: BACK ON THE RECORD, AND PLEASE CALL YOUR
5 FIRST WITNESS.

6 MS. TREBICKA: THANK YOU, YOUR HONOR.

7 GOOGLE CALLS CHRIS LIAO.

8 THE COURT: MR. LIAO, PLEASE COME FORWARD AND
9 APPROACH THE WITNESS BOX. MY COURTROOM DEPUTY WILL SWEAR YOU
10 IN.

11 THE CLERK: PLEASE RAISE YOUR RIGHT HAND.

12 **(DEFENDANT'S WITNESS, CHRIS LIAO, WAS SWORN.)**

13 THE WITNESS: YES.

14 THE CLERK: THANK YOU. HAVE A SEAT.

15 THE COURT: PLEASE STATE YOUR FULL NAME.

16 THE WITNESS: MY NAME IS CHRIS LIAO.

17 THE COURT: OKAY. MR. LIAO, YOU MAY REMOVE YOUR
18 MASK.

19 PLEASE SPEAK TOWARDS THE MICROPHONE SO EVERYONE CAN HEAR
20 YOU.

21 AND YOU MAY PROCEED.

22 MS. TREBICKA: THANK YOU, YOUR HONOR.

23 **DIRECT EXAMINATION**

24 BY MS. TREBICKA:

25 Q. THANK YOU, MR. LIAO. GOOD AFTERNOON.

1 A. GOOD AFTERNOON.

2 Q. THANK YOU FOR WAITING PATIENTLY DOWNSTAIRS FOR US.

3 WHAT IS YOUR ROLE CURRENTLY AT GOOGLE?

4 A. I'M A SOFTWARE ENGINEER AT GOOGLE.

5 Q. AND WHAT TEAM DO YOU WORK WITH?

6 A. I MANAGE THE ADS IDENTITY INFRASTRUCTURE TEAM.

7 Q. HOW LONG HAVE YOU WORKED AT GOOGLE?

8 A. FOR ABOUT TEN YEARS.

9 Q. HOW LONG HAVE YOU MANAGED THE ADS IDENTITY AND
10 INFRASTRUCTURE TEAM?

11 A. FOR ABOUT THREE YEARS.

12 Q. JUST TELL US GENERALLY, TELL THE COURT GENERALLY, WHAT THE
13 ADS IDENTITY AND INFRASTRUCTURE TEAM DOES.

14 A. SO IDENTITY INFRASTRUCTURE AND ADS IS A COLLECTION OF SOME
15 ONLINE SERVERS AND OFFLINE PIPELINES. COLLECTIVELY, THE
16 INFRASTRUCTURE IS RESPONSIBLE FOR THINGS LIKE INGESTING
17 COOKIES, PARSING COOKIES, RETRIEVING USER CONSENT SETTINGS, AS
18 WELL AS DETERMINING WHETHER OR NOT, FOR EXAMPLE, AN AD QUERY IS
19 SERVED IN GAIA MODE VERSUS BISCOTTI MODE.

20 Q. WHAT IS [REDACTED]?

21 A. [REDACTED] STANDS FOR [REDACTED].

22 Q. DOES THAT FIT WITHIN THE GOOGLE ADS IDENTITY
23 INFRASTRUCTURE?

24 A. [REDACTED] IS PART OF THE IDENTITY INFRASTRUCTURE.

25 Q. SO YOU MANAGE [REDACTED] AS WELL?

1 A. YES.

2 Q. OTHER THAN MANAGING THE GOOGLE ADS IDENTITY AND
3 INFRASTRUCTURE, DO YOU HAVE ANY OTHER RESPONSIBILITIES WITHIN
4 GOOGLE?

5 A. YES. MY PRIMARY RESPONSIBILITY FOR THE PAST THREE YEARS
6 INCLUDED MANY DIFFERENT PROJECTS ACROSS DIFFERENT GOOGLE TEAMS
7 AND FUNCTIONS. SOME OF THE EXAMPLES WERE TRANSITIONING SAME
8 SIDE COOKIES ACROSS ALL OF THE GOOGLE, MAJOR GOOGLE COOKIES,
9 ACROSS ADS TEAMS, AND ALSO TEAMS OUTSIDE OF THAT.

10 MY RESPONSIBILITY ALSO INCLUDED SOME OF THE CRITICAL
11 RESPONSES TO APPLE'S IOS 14 CHANGES IN ADS; AND OTHER
12 RESPONSIBILITIES INCLUDED DEVELOPING LIBRARIES FOR PRIVACY AND
13 IDENTITY INFRASTRUCTURE FOR OUR NEW CLIENTS ACROSS ADS.

14 Q. ARE YOU PART OF GOOGLE AD MANAGER?

15 A. NO.

16 Q. WHEN I SAY "YOU," I MEAN YOUR TEAM, THE GOOGLE ADS
17 IDENTITY AND INFRASTRUCTURE TEAM.

18 A. THAT'S CORRECT, NEITHER MYSELF OR MY TEAM ARE PART OF THE
19 GOOGLE AD MANAGER ORG.

20 Q. WHAT ABOUT GOOGLE ANALYTICS? ARE YOU OR YOUR TEAM PART OF
21 ANALYTICS?

22 A. NO.

23 Q. ARE YOU PART OF THE CHROME ORGANIZATION WITHIN GOOGLE?

24 A. NO.

25 Q. HOW MANY EMPLOYEES WITHIN GOOGLE REPORT TO YOU?

1 A. APPROXIMATELY 22 TO 24.

2 Q. DOES BERT LEUNG REPORT TO YOU?

3 A. YES.

4 Q. DOES MANDY LIU REPORT TO YOU?

5 A. MANDY REPORTS TO BERT, WHO THEN REPORTS TO ME.

6 Q. DO YOU RECALL A PROJECT INVOLVING THE

7 MAYBE_CHROME_INCOGNITO BIT?

8 A. YES.

9 Q. AND THAT IS WHY WE'RE HERE TODAY; CORRECT?

10 A. THAT IS MY UNDERSTANDING.

11 Q. WHEN DID YOU FIRST START WORKING ON THAT PROJECT?

12 A. I FIRST STARTED WORKING ON THAT PROJECT I BELIEVE AROUND

13 THE SECOND HALF OR TOWARDS THE END OF 2019.

14 Q. AND WHAT IS IT THAT YOU DID IN 2019 FOR THIS PROJECT?

15 A. THE EXERCISE AT THE TIME, AS I RECALL NOW, WAS PRIMARILY

16 TO ESTIMATE THE APPROXIMATE IMPACT TO GOOGLE'S ADVERTISING

17 REVENUE AS A RESULT OF CERTAIN CHANGES IN CHROME.

18 Q. WHAT WERE THOSE CHANGES? DESCRIBE THEM IN A FEW WORDS.

19 AND PLEASE, MR. LIAO, BE MINDFUL OF THE FACT THAT WE HAVE

20 AGREED TO USE CERTAIN CODE NAMES SO WE CAN KEEP THESE

21 PROCEEDINGS PUBLIC.

22 A. RIGHT. SO THE CHROME CHANGES WERE MAINLY ABOUT BLOCKING

23 THIRD PARTY COOKIES INSIDE INCOGNITO MODE.

24 Q. WHO ELSE WORKED ON THAT PROJECT WITH YOU?

25 A. ON MY TEAM, MY RECOLLECTION IS BERT AND I WORKED ON THE

1 PROJECT TOGETHER.

2 THERE WERE A LARGE NUMBER OF PEOPLE INSIDE AND OUTSIDE OF
3 ADS THAT WERE INVOLVED IN THE PROJECT AS WELL.

4 Q. AT A GENERAL LEVEL, WHAT DID YOU ATTEMPT TO DO WITH THIS
5 PROJECT?

6 A. WE WERE ATTEMPTING TO APPROXIMATELY INFER THE POTENTIAL
7 IMPACT TO GOOGLE'S ADVERTISING REVENUE AS A RESULT OF THE
8 CHANGES THAT I MENTIONED EARLIER.

9 Q. DID YOU HAVE TO ESTIMATE THE INCOGNITO TRAFFIC TO BE ABLE
10 TO DO THAT FOR YOUR PROJECT?

11 A. YES.

12 Q. AND HOW DID YOU DO THAT? HOW DID YOU ESTIMATE INCOGNITO
13 TRAFFIC IN ADS?

14 A. WE HAD A NUMBER OF DISCUSSIONS BETWEEN ADS ENGINEERS AND
15 CHROME ENGINEERS, AND THROUGH THE NUMBER OF CONVERSATIONS, WE
16 ENDED UP USING THE ABSENCE OF X-CLIENT DATA HEADER AS AN
17 APPROXIMATE INDICATION OF INCOGNITO MODE.

18 Q. WHAT IS THE X-CLIENT DATA HEADER?

19 A. MY UNDERSTANDING IS IT IS A -- IT IS AN HTTP HEADER SENT
20 BY THE CHROME BROWSER TO GOOGLE DOMAINS UNDER SOME
21 CIRCUMSTANCE, BUT NOT UNDER ALL CIRCUMSTANCES.

22 Q. AND WHY WOULD THE ABSENCE OF THE X-CLIENT DATA HEADER HELP
23 YOU IN YOUR PROJECT?

24 A. BECAUSE OUR UNDERSTANDING, COMING FROM THOSE CONVERSATIONS
25 WITH CHROME, BASICALLY WAS THE HEADER IN QUESTION HERE WILL NOT

1 BE SENT UNDER INCOGNITO MODE.

2 BUT ALSO, IT WILL NOT BE SENT UNDER A LARGE NUMBER OF
3 OTHER CIRCUMSTANCES.

4 Q. WELL, LET ME ASK YOU, HOW RELIABLE AN INDICATOR IS THE
5 ABSENCE OF THE X-CLIENT DATA HEADER AS A DETECTION TOOL FOR
6 CHROME INCOGNITO?

7 A. MY UNDERSTANDING -- AGAIN, DERIVED FROM ALL THE
8 CONVERSATIONS WITH THE CHROME ENGINEERS -- IS THAT IT IS NOT
9 VERY RELIABLE AS AN INDICATION.

10 Q. WHY IS IT --

11 MR. YANCHUNIS: YOUR HONOR, EXCUSE ME. I WOULD MOVE
12 TO STRIKE THAT. THAT'S CLEARLY HEARSAY. HE JUST RELATED THAT
13 HE GAINED THAT FROM THE CONVERSATIONS WITH OTHERS.

14 THOSE OTHERS ARE NOT HERE IN THE COURTROOM, IN WHICH CASE
15 I CANNOT CROSS-EXAMINE THEM.

16 MS. TREBICKA: MAY I RESPOND?

17 THE COURT: YES.

18 MS. TREBICKA: YOUR HONOR, IT'S ABOUT THE STATE OF
19 MIND. IT'S ABOUT THE EFFECT ON THE LISTENER.

20 THE COURT: I'M GOING TO ALLOW IT. YOU'LL BE ABLE TO
21 CROSS HIM.

22 GO AHEAD.

23 MS. TREBICKA: AND, THEREFORE, THE TESTIMONY IS
24 ALREADY IN?

25 THE COURT: UM-HUM.

1 BY MS. TREBICKA:

2 Q. MR. LIAO, MY QUESTION, AND I THINK THE QUESTION THAT
3 OTHERS ARE ASKING AS WELL, IS WHY WOULD YOU USE THAT THEN? WHY
4 WOULD YOU USE THE ABSENCE OF THE X-CLIENT DATA HEADER TO
5 DETERMINE THE APPROXIMATE AMOUNT OF INCOGNITO TRAFFIC?

6 A. BECAUSE THE PURPOSE OF THE EXERCISE, AGAIN, IS TO, IS TO
7 APPROXIMATE THE POTENTIAL REVENUE IMPACT.

8 WE DIDN'T REQUIRE AN EXACT NUMBER, AND IT WAS DETERMINED
9 THAT THE ABSENCE OF THE X-CLIENT DATA HEADER WAS A PROCESS
10 SIGNAL THAT CAN GIVE US THAT APPROXIMATE APPROXIMATION TO THE
11 REVENUE, POTENTIAL REVENUE IMPACT.

12 Q. AS PART OF YOUR ANALYSIS IN THIS PROJECT, DID YOUR TEAM
13 EVER ATTEMPT TO IDENTIFY PARTICULAR INCOGNITO USERS?

14 A. NO.

15 Q. RECALL THAT WE STARTED THIS EXAMINATION WHEN I ASKED YOU
16 ABOUT THE MAYBE_CHROME_INCOGNITO BIT.

17 WHO CREATED THE CHROME, THE MAYBE_CHROME_INCOGNITO BIT?

18 A. I BELIEVE BERT AND MANDY CREATED THE BIT.

19 Q. AND IS THAT BERT LEUNG AND MANDY LIU?

20 A. YES.

21 Q. WHY DID THEY CREATE THE BIT?

22 A. MY UNDERSTANDING IS THE BIT WAS CREATED, OR THE FIELD IN
23 THE LOG WAS CREATED TO POWER A DASHBOARD WHOSE PURPOSE IS TO
24 MONITOR OR KEEP AN EYE ON THE SLICE OF TRAFFIC WHERE WE THINK
25 THIRD PARTY COOKIES MAY BE BLOCKED IN AD QUERIES.

1 Q. IS -- WAS THIS A CONTINUATION OF THE PROJECT THAT WE
2 TALKED ABOUT THAT YOU SAID STARTED IN 2019?

3 A. YES.

4 Q. AND WHAT WAS THE PURPOSE OF THIS CONTINUATION OF THE
5 PROJECT?

6 A. THE CONTINUATION, THE PURPOSE OF CONTINUING THAT IS STILL
7 TO APPROXIMATELY MONITOR THE SLICE OF TRAFFIC AND THE POTENTIAL
8 REVENUE IMPACT OF THIRD PARTY COOKIE BLOCKING, AND ALSO HOW THE
9 SLICE OF TRAFFIC CHANGES OVER TIME.

10 Q. NOW, DO YOU UNDERSTAND, AT A HIGH LEVEL, HOW THE
11 MAYBE_CHROME_INCOGNITO BIT WORKS?

12 A. I HAVE A HIGH LEVEL UNDERSTANDING OF IT.

13 Q. COULD YOU EXPLAIN?

14 A. MY UNDERSTANDING OF HOW THIS BIT IS COMPUTED IS THAT IT
15 TAKES IN, AS INPUT, TWO PIECES OF INFORMATION: ONE IS THE
16 ABSENCE OF THE X-CLIENT DATA HEADER; THE OTHER IS THE USER
17 AGENT HEADER.

18 Q. NOW, HOW DOES THIS LOGIC THAT YOU JUST EXPLAINED FOR THE
19 MAYBE_CHROME_INCOGNITO BIT DIFFER FROM THE LOGIC THAT YOU USED
20 IN THE INITIAL PART OF THE PROJECT IN 2019?

21 A. MY UNDERSTANDING IS THEY'RE THE SAME.

22 Q. IS THE MAYBE_CHROME --

23 THE COURT: THAT'S TIME. LAST QUESTION.

24 MS. TREBICKA: YES, UNDERSTOOD, YOUR HONOR.

25 MAY I HAVE A SECOND?

1 THE COURT: OKAY.

2 (PAUSE IN PROCEEDINGS.)

3 BY MS. TREBICKA:

4 Q. IS THE MAYBE_CHROME_INCOGNITO BIT A DEDICATED SIGNAL FOR
5 INCOGNITO MODE?

6 A. NO.

7 MS. TREBICKA: NO FURTHER QUESTIONS.

8 THE COURT: THANK YOU.

9 CROSS-EXAMINATION.

10 MR. YANCHUNIS: EXHIBIT 103, PLEASE.

11 **CROSS-EXAMINATION**

12 BY MR. YANCHUNIS:

13 Q. MR. LIAO, I'D LIKE TO SHOW YOU A DOCUMENT THAT HAS BEEN
14 MARKED AS EXHIBIT 103.

15 DO YOU HAVE THAT IN FRONT OF YOU ON THE SCREEN?

16 A. YES.

17 Q. OKAY. THIS IS AN EMAIL STRING THAT STARTS WITH THE FIRST
18 EMAIL ON THE LAST PAGE AND THEN BUILDS BACK TO THE FIRST PAGE
19 CHRONOLOGICALLY; CORRECT?

20 A. MAY I?

21 CAN YOU SCROLL UP SO THAT I CAN MAKE SURE IT'S
22 CHRONOLOGICAL?

23 Q. I'LL HAVE THAT DONE FOR YOU.

24 A. YES, IT APPEARS THAT WAY.

25 Q. OKAY. ON THE PAGE ENDING WITH THE NUMBER 293, REFERENCING

1 THE BATES NUMBER IN THE LOWER RIGHT-HAND CORNER --

2 A. YES.

3 Q. OKAY. YOU STARTED THIS EMAIL STRING ON JULY 10TH, 2020;
4 CORRECT?

5 A. YES.

6 Q. AND YOU WROTE, AND LET ME QUOTE IT, "SO FAR, ALL METRICS
7 LOOK STABLE, AND AS EXPECTED:

8 "CHROME METRICS SHOW NO SIGNIFICANT CHANGES IN INCOGNITO
9 USAGE."

10 DID I READ THAT CORRECTLY?

11 A. YES.

12 Q. AND THAT UNDERLINED TEXT IS A HYPERLINK THAT WOULD LEAD TO
13 AN INTERNAL GOOGLE PAGE, SUCH AS A WIKI, A WIKI-TYPE PAGE;
14 CORRECT?

15 A. I DO NOT RECALL, NOR CAN I TELL ON WHAT THE LINK GOES TO
16 FROM JUST THE SCREENSHOT HERE.

17 Q. ALL RIGHT. DO YOU RECALL WHETHER THAT LINK TRACKED
18 INCOGNITO USAGE IN CHROME?

19 A. I WOULD HAVE TO CLICK ON IT TO MAKE SURE, BUT IT DOES LOOK
20 LIKE THE LINK TO ME.

21 Q. OKAY. I'M HAVING TECHNICAL DIFFICULTIES HERE.

22 EXCUSE ME, YOUR HONOR. I'M HAVING A LITTLE BIT OF A
23 PROBLEM HERE.

24 (PAUSE IN PROCEEDINGS.)

25 BY MR. YANCHUNIS:

1 Q. LOOK AT THE SECOND BULLET POINT ON THE SAME PAGE.

2 AND IN THAT, YOU WROTE, AND I'LL QUOTE, "ADS (PROXY)
3 METRICS SHOW STABLE INCOGNITO DETECTION LEVELS AS WELL:
4 SEARCH, DISPLAY."

5 DID I READ THAT CORRECTLY?

6 A. YES.

7 Q. DO YOU RECALL WRITING THAT?

8 A. YES.

9 Q. AND INCOGNITO DETECTION, THAT'S REFERRING TO CHROME
10 INCOGNITO; RIGHT?

11 A. I BELIEVE SO.

12 Q. OKAY. AND YOU'RE REFERRING TO BOTH SEARCH AND DISPLAY;
13 RIGHT?

14 A. I BELIEVE THE REFERENCE HERE IS TO SEARCH ADS AND DISPLAY,
15 YES.

16 Q. AND DISPLAY, IS THAT ADS?

17 A. YES.

18 Q. AND LIKE WITH THE BULLET POINT, THE UNDERLYING TEXT ARE A
19 HYPERLINK THAT WOULD LEAD TO AN INTERNAL GOOGLE PAGE, SUCH AS A
20 WIKI, OR SOME OTHER TYPE OF PAGE; CORRECT?

21 A. AS I STATED BEFORE, I THINK I WOULD HAVE TO CLICK ON IT TO
22 MAKE SURE WHAT IT LINKS OUT TO, BUT THEY DO APPEAR TO ME AS
23 LINKS.

24 Q. OKAY. AND THE LINKS FOR THOSE PAGES TRACKED INCOGNITO
25 USAGE IN CHROME; CORRECT?

1 A. I CANNOT CONFIRM THAT RIGHT HERE WITHOUT CLICKING ON THEM.

2 Q. YOU DON'T HAVE A RECOLLECTION OF THAT?

3 A. I RECALL THIS COMMUNICATION, BUT I DON'T RECALL WHAT
4 EXACTLY THEY LINK OUT TO AS I SIT HERE RIGHT NOW.

5 Q. FURTHER ON INTO THE EMAIL, YOUR COLLEAGUES GO ON TO
6 DISCUSS THE IS_CHROME_INCOGNITO BIT AND WHETHER IT IS BEING
7 LOGGED AS SEARCH AND DISPLAY CLICKS.

8 DO YOU SEE THAT ON THE SAME PAGE?

9 A. WHICH PARAGRAPH ARE YOU REFERRING TO, PLEASE?

10 Q. RYAN, WILL YOU GET THAT ON THE DOCUMENT, PLEASE?

11 A. YES, I SEE IT.

12 Q. WHAT DOES THAT REFER TO, SIR?

13 A. I BELIEVE THIS WAS A QUESTION FROM AMIN CHARANIYA TO BERT
14 ON WHETHER OR NOT THERE IS A PROXY THAT CAN BE LOGGED OR USED
15 INSTEAD OF THE INCOGNITO BIT.

16 Q. AND INCOGNITO, WHAT DOES THAT REFER TO?

17 A. I'M NOT COMPLETELY SURE WHAT AMIN MAY HAVE MEANT BY THAT.
18 BUT MY, MY GUESS, AS I'M SITTING HERE, WOULD BE THAT HE WAS
19 REFERRING TO THE MAYBE_CHROME_INCOGNITO UNDERSCORE BIT.

20 Q. OKAY. NOT -- HE WASN'T REFERRING TO IS_CHROME_INCOGNITO?

21 A. AS I STATED BEFORE, I DON'T KNOW WHAT AMIN MEANT IN THAT
22 MESSAGE, BUT MY GUESS WOULD BE THAT HE WAS REFERRING TO THE
23 MAYBE_CHROME_INCOGNITO BIT OR FIELD IN THE LOG.

24 Q. COULD IT BE THAT THIS IS A FOURTH INCOGNITO DETECTION BIT?

25 A. SORRY, CAN YOU REPEAT THAT?

1 Q. COULD HE HAVE BEEN REFERRING TO A FOURTH INCOGNITO
2 DETECTION BIT?

3 A. CAN YOU CLARIFY --

4 Q. YES, SIR.

5 A. -- WHAT IS THAT FOURTH ONE?

6 Q. YES, SIR. WE HAVE AN IS_CHROME_INCOGNITO BIT; CORRECT?

7 A. SORRY. WHICH PART ARE YOU REFERRING TO?

8 Q. I'M JUST ASKING YOU, IN CONNECTION WITH, AT GOOGLE, THERE
9 IS AN IS_CHROME_INCOGNITO BIT?

10 A. THAT IS NOT THE NAME OF THE BIT THAT MY TEAM CREATED.

11 Q. OKAY. BUT ARE YOU AWARE OF A BIT CALLED
12 IS_CHROME_INCOGNITO?

13 A. I AM NOT PERSONALLY AWARE. BUT THERE MAY BE SUCH A BIT
14 SOMEWHERE.

15 Q. OKAY. YOU KNOW THAT THERE IS A BIT CALLED
16 IS_CHROME_NON_INCOGNITO; CORRECT?

17 A. I AM NOT PERSONALLY AWARE OF THAT BIT. BUT IT MAY EXIST
18 SOMEWHERE.

19 Q. MR. LIAO, ON APRIL 4TH, 2022, YOU EXECUTED A DECLARATION
20 FOR GOOGLE'S OPPOSITION TO THIS MOTION.

21 DO YOU RECALL DOING THAT?

22 A. YES.

23 Q. OKAY.

24 YOUR HONOR, THAT'S FOUND AT DOCKET ENTRY 528-3.

25 DO YOU NEED TO SEE YOUR DECLARATION?

1 A. IT WOULD BE GREAT IF I CAN, PLEASE.

2 THE COURT: IS IT A TAB?

3 BY MR. YANCHUNIS:

4 Q. THERE IT IS IN FRONT OF YOU, MR. LIAO.

5 THE COURT: IS IT A TAB IN MY BINDER OF EXHIBITS?

6 MR. MCGEE: TAB 27, YOUR HONOR.

7 THE COURT: THANK YOU.

8 BY MR. YANCHUNIS:

9 Q. DO YOU HAVE IT ON THE SCREEN?

10 A. YES, I DO.

11 Q. LET'S GO TO PARAGRAPH 5 OF YOUR DECLARATION.

12 IN PARAGRAPH 5, YOU ALLEGE THERE ARE TWO PRIMARY HURDLES
13 WITH USING THE ABSENCE OF THE X-CLIENT DATA HEADER TO IDENTIFY
14 INCOGNITO TRAFFIC; CORRECT?

15 A. YES.

16 Q. OKAY. LET'S GO TO PARAGRAPH 6.

17 IN PARAGRAPH 6, YOU PROVIDE THE FIRST HURDLE, WHICH IS
18 THAT SOME CHROME TRAFFIC THAT IS NOT INCOGNITO MAY STILL
19 PRODUCE AN EMPTY X-CLIENT DATA HEADER FIELD; CORRECT?

20 A. YES.

21 Q. SO IN PLAIN ENGLISH, THIS WOULD RESULT IN ALL INCOGNITO
22 TRAFFIC AND HYPOTHETICALLY SOME SLICE OF NON-INCOGNITO TRAFFIC;
23 CORRECT?

24 A. IN NOT SENDING THE X-CLIENT DATA HEADER, I'M ASSUMING
25 THAT'S WHAT YOU MEANT.

1 Q. YES.

2 A. YES.

3 Q. AND IN PARAGRAPH 7, YOU PROVIDE THE SECOND HURDLE, WHICH
4 IS A TWO-PART EXAMPLE. FIRST, THAT SOME NON-CHROME TRAFFIC MAY
5 SPOOF ITSELF TO LOOK LIKE CHROME TRAFFIC.

6 DID I GET THAT RIGHT?

7 A. YES.

8 Q. AND SECOND FOR THAT TRAFFIC, BECAUSE IT'S NOT CHROME
9 TRAFFIC TO BEGIN WITH, IT WON'T HAVE X-CLIENT DATA HEADER
10 ASSOCIATED WITH IT.

11 DID I GET THAT RIGHT?

12 A. YES.

13 Q. SO IN PLAIN ENGLISH, THAT WOULD RESULT IN ALL INCOGNITO
14 TRAFFIC AND HYPOTHETICALLY SOME SLICE OF NON-CHROME TRAFFIC;
15 CORRECT?

16 A. AGAIN, IN NOT SENDING THE X-CLIENT DATA HEADER, THAT IS
17 CORRECT.

18 Q. OKAY. SO BOTH EXAMPLES IN PARAGRAPH 6 AND 7 WOULD STILL
19 IDENTIFY ALL INCOGNITO TRAFFIC, PLUS SOME EDGE CASES; RIGHT?

20 MR. SCHAPIRO: OBJECTION.

21 THE WITNESS: I --

22 MR. SCHAPIRO: WITHDRAW MY OBJECTION. SORRY.

23 THE COURT: YOU CAN ANSWER.

24 THE WITNESS: SO THE INACCURACIES ASSOCIATED WITH
25 USING THE ABSENCE OF X-CLIENT DATA HEADER IN DETECTING

1 INCOGNITO MODE IS THAT BASED ON OUR UNDERSTANDING, WHICH WE
2 DERIVED PRIMARILY THROUGH A SERIES OF CONVERSATIONS WITH THE
3 CHROME ENGINEERS, IS THAT THERE ARE EDGE CASES, THERE ARE CASES
4 IN CHROME, AND ALSO NON-CHROME BROWSERS WHERE WE WOULDN'T BE
5 ABLE TO SERVE THIS HEADER THAT IS OUTSIDE OF INCOGNITO MODE.
6 BY MR. YANCHUNIS:

7 Q. BUT OTHERWISE, IT WOULD IDENTIFY ALL INCOGNITO TRAFFIC,
8 PLUS SOME EDGE CASES; RIGHT?

9 A. THAT IS CORRECT, ALTHOUGH I DO NOT KNOW HOW SUBSTANTIAL IN
10 TERMS OF THE AMOUNT OF TRAFFIC THE EDGE CASES REPRESENT.

11 Q. DURING YOUR DIRECT EXAMINATION, YOU SAID YOU WERE FAMILIAR
12 WITH [REDACTED], OR AS YOU IDENTIFIED IT, [REDACTED];
13 CORRECT?

14 A. YES.

15 THE COURT: I HAVE YOU AT JUST ABOUT TIME,
16 MR. YANCHUNIS.

17 MR. YANCHUNIS: DO I HAVE ONE QUESTION, YOUR HONOR?

18 THE COURT: ABSOLUTELY.

19 BY MR. YANCHUNIS:

20 Q. DOES GOOGLE ANALYTICS USE [REDACTED]?

21 A. I'M NOT VERY FAMILIAR WITH GOOGLE ANALYTICS, BUT IN SOME
22 OF THEIR SERVING PATH, I BELIEVE [REDACTED] MAY BE INVOLVED.

23 MR. YANCHUNIS: YOUR HONOR, THANK YOU.

24 I APPRECIATE YOUR TIME. THANK YOU, MR. LIAO.

25 THE COURT: THANK YOU.

1 YOU MAY STEP DOWN, MR. LIAO. THANK YOU.

2 NEXT WITNESS?

3 THE CLERK: WHO ARE WE CALLING NEXT?

4 MR. ANSORGE: YES, GOOGLE WILL BE CALLING

5 MR. BERT LEUNG. HE'S JUST OUTSIDE.

6 (PAUSE IN PROCEEDINGS.)

7 THE COURT: MR. LEUNG, PLEASE COME FORWARD. COME

8 RIGHT UP HERE TO THE WITNESS STAND. THANK YOU.

9 AND RAISE YOUR HAND. YOU HAVE PLENTY OF TIME. THANK YOU.

10 IF YOU'LL RAISE YOUR RIGHT HAND, PLEASE.

11 **(DEFENDANT'S WITNESS, WING-PAN LEUNG, WAS SWORN.)**

12 THE WITNESS: YES, I DO.

13 THE CLERK: HAVE A SEAT, PLEASE.

14 THE COURT: PLEASE STATE YOUR FULL NAME.

15 THE WITNESS: WING-PAN LEUNG.

16 THE COURT: OKAY. MR. LEUNG, YOU MAY REMOVE YOUR

17 MASK --

18 THE WITNESS: OKAY.

19 THE COURT: -- IF YOU WOULD LIKE.

20 AND SPEAK INTO THE MICROPHONE. THAT WILL HELP THE COURT

21 REPORTER.

22 THE WITNESS: OKAY.

23 THE COURT: OKAY. THANK YOU.

24 YOU MAY PROCEED.

25 MR. ANSORGE: THANK YOU, YOUR HONOR.

DIRECT EXAMINATION

BY MR. ANSORGE:

Q. GOOD AFTERNOON, MR. LEUNG.

A. GOOD AFTERNOON.

Q. HOW LONG HAVE YOU WORKED AT GOOGLE?

A. ABOUT EIGHT YEARS.

Q. WHAT IS YOUR CURRENT ROLE AT GOOGLE?

A. SOFTWARE ENGINEER.

Q. MR. LEUNG, WHY COULD YOU NOT APPEAR FOR A DEPOSITION ON
FEBRUARY 24TH?

A. I WAS IN AN EMERGENCY -- ENGINEERING EMERGENCY RELATED TO
GOOGLE SEARCH.

Q. DID ANY LAWYER TELL YOU NOT TO APPEAR FOR A DEPOSITION ON
FEBRUARY 24TH?

A. NO.

Q. WHAT IS AN X-CLIENT DATA HEADER?

A. MY UNDERSTANDING OF X-CLIENT DATA HEADER IS AN INPUT
SIGNAL THAT IS GENERATED AND SENT BY CHROME BROWSERS TO WEB
SERVERS.

Q. AND WHAT IS THE PURPOSE OF THE X-CLIENT DATA HEADER?

A. MY UNDERSTANDING IS IT'S FOR CHROME TO ENABLE THE SERVERS
TO EXPERIMENTAL FEATURES.

Q. MR. LEUNG, DO YOU RECALL WORK ON ANY PROJECTS THAT USED
THE ABSENCE OF THE X-CLIENT DATA HEADER AS AN INPUT?

A. YES.

1 Q. AND OVER THE EIGHT YEARS THAT YOU'VE WORKED AT GOOGLE,
2 APPROXIMATELY HOW MUCH TIME IN TOTAL DID YOU SPEND ON THOSE
3 PROJECTS?

4 A. IN AGGREGATE, IT'S PROBABLY ABOUT A WEEK OF MY TIME.

5 Q. CAN YOU PLEASE DESCRIBE THE PROJECT.

6 A. THE FIRST PROJECT IS TO UNDERSTAND THE IMPACT OF A
7 PREVIOUS CHROME LAUNCH IN TERMS OF THE THIRD PARTY COOKIE
8 BLOCKING FOR INCOGNITO MODE.

9 THEN THERE'S EXTENSION OF THE PROJECT.

10 Q. DID YOU HAVE A RELIABLE WAY TO MEASURE AGGREGATE INCOGNITO
11 TRAFFIC FOR THOSE PROJECTS?

12 A. NO.

13 Q. WHY NOT?

14 A. THE PROJECT RELIES ON THE HEURISTIC METHOD, WHICH IS BASED
15 ON ONE OF THE SIGNALS -- ONE OF THE INPUT IS BASED ON THE
16 ABSENCE OF THE X-CLIENT DATA HEADER.

17 BUT THERE ARE A NUMBER OF REASONS THAT THOSE CAN BE ABSENT
18 NOT RELATED TO CHROME INCOGNITO MODE, SO THAT'S NOT A RELIABLE
19 SIGNAL.

20 Q. SO HOW DID YOUR TEAM ATTEMPT TO APPROXIMATE THE INCOGNITO
21 TRAFFIC?

22 A. IT'S BASED ON A HEURISTIC METHOD, WHICH IS BASED ON THE
23 NUMBER OF INPUTS, THE ABSENCE OF X-CLIENT DATA TO IDENTIFY
24 CHROME THROUGH, THROUGH USER AGENT, BUT ALSO THAT'S NOT A VERY
25 RELIABLE WAY SPECIFICALLY.

1 THEN ALSO TRYING TO PROVE A NUMBER OF WAY -- POSSIBILITIES
2 THAT THE X-CLIENT DATA WILL NEVER BE, BE -- WOULD NEVER EXIST
3 EVEN REGARDLESS IF IT'S IN INCOGNITO MODE OR NOT.

4 Q. AND IS THE ABSENCE OF THE X-CLIENT DATA HEADER A RELIABLE
5 SIGNAL TO DETECT INCOGNITO TRAFFIC?

6 A. NO.

7 Q. WHY NOT?

8 A. THERE ARE OTHER POSSIBILITIES AND NO SCENARIOS THAT THE
9 X-CLIENT DATA HEADER WOULD BE SIMPLY ABSENT REGARDLESS WHETHER
10 IT'S CHROME INCOGNITO OR NOT.

11 Q. WILL YOU PLEASE GIVE US AN EXAMPLE OF A CASE WHERE THE
12 X-CLIENT DATA HEADER IS NOT PRESENT EVEN IF THE USER IS NOT IN
13 INCOGNITO MODE?

14 A. ONE OF THE EXAMPLES WOULD BE OUR IOS CHROME BROWSERS.

15 THE COURT: I'M SORRY, WHAT WAS THAT?

16 THE WITNESS: IOS CHROME BROWSERS.

17 THE COURT: IOS?

18 THE WITNESS: CHROME BROWSERS ON IPHONE.

19 BY MR. ANSORGE:

20 Q. COULD YOU PLEASE EXPLAIN THAT A LITTLE BIT MORE FOR US?

21 A. TO THE BEST OF MY KNOWLEDGE, X-CLIENT DATA IS SIMPLY NOT
22 GENERATED OR SENT IN IOS CHROME BROWSER, REGARDLESS OF THE USER
23 IS IN INCOGNITO MODE OR NOT.

24 Q. SO IF A USER IS ON CHROME BROWSER ON AN IPHONE, CAN THE
25 ABSENCE OF THE X-CLIENT DATA HEADER BE USED TO INFER THAT A

1 USER IS IN INCOGNITO MODE?

2 A. NO.

3 Q. AND HOW DID YOU ACCOUNT FOR CHROME IOS TRAFFIC IN THE
4 PROJECT?

5 A. IN THE HEURISTIC, WE SEEM TO EXCLUDE THOSE TRAFFIC.

6 Q. MR. LEUNG, DID YOUR TEAM EVER ATTEMPT TO MEASURE THE ERROR
7 RATE FOR CASES WHERE THE X-CLIENT DATA HEADER WAS MISSING, BUT
8 THE TRAFFIC WAS NOT IN INCOGNITO?

9 A. NO.

10 Q. WHY NOT?

11 A. THERE'S NO RELIABLE WAY TO MEASURE THE ERROR RATE BECAUSE
12 THERE'S NO GROUND TRUTH TO MEASURE THAT.

13 Q. MR. LEUNG, IF THE AGGREGATE RATIO OF THE
14 MAYBE_CHROME_INCOGNITO HEURISTIC OUTPUT IS AT 3 PERCENT, DOES
15 THAT MEAN THAT THE HEURISTIC HAS PROPERLY DETECTED INCOGNITO
16 TRAFFIC IN EACH INSTANCE?

17 A. THERE'S NO PROOF OF THAT.

18 Q. WHY NOT?

19 A. THE HEURISTIC IS BASED ON THE, THE -- WHEN USING THE
20 HEURISTIC AND LOOKING INTO THE REQUEST SIGNALS TO COMPUTE THE
21 OUTPUT.

22 BUT ON THE OTHER HAND, THE 3 PERCENT NUMBER IS ALSO A, A
23 NUMBER THAT CHROME USES AND PROVIDED TO ME IN THE PROJECT, BUT
24 THAT'S BASED ON A DIFFERENT DATA SET.

25 SO THEY ARE -- THEY ARE COMING FROM TWO DIFFERENT DATA

1 SETS.

2 AND THERE'S ALSO NO GUARANTEE THAT THE SAME 3 -- EVEN WITH
3 BOTH SIDES COME UP WITH 3 PERCENT, THERE'S NO GUARANTEE THAT
4 THEY'RE ACTUALLY POINTING TO THE SAME 3 PERCENT OF THE TRAFFIC.

5 SO WITHOUT THOSE PROOF, THERE'S NO WAY FOR ME TO SAY THAT
6 THE HEURISTIC CAN BE RELIABLE ENOUGH.

7 Q. WHAT ARE SOME OF THE DIFFERENCES BETWEEN THOSE TWO DATA
8 SETS?

9 A. MY UNDERSTANDING ON THE CHROME SIDE, THEY ARE MEASURING
10 PAGE LOAD.

11 ON ADS, WE ARE MEASURING PER REQUEST.

12 Q. MR. LEUNG, IF THE ABSENCE OF THE X-CLIENT DATA HEADER IS
13 NOT A RELIABLE MEANS TO DETECT INCOGNITO TRAFFIC, THEN WHY DID
14 YOUR TEAM USE IT?

15 A. EVEN IF IT'S NOT RELIABLE ENOUGH, BUT THEY ARE -- BUT THE
16 HEURISTIC IS GOOD ENOUGH FOR THE PURPOSE OF THE PROJECT.

17 Q. AND WHAT IS A HEURISTIC?

18 A. A HEURISTIC IS, IN MY UNDERSTANDING, IS A SIMPLER AND
19 FASTER WAY TO COMPUTE INPUT WHICH WOULD BE GOOD ENOUGH FOR THE
20 PURPOSE, EVEN THOUGH IT'S NOT COMPREHENSIVE AND NOT SUPER
21 RELIABLE.

22 Q. MR. LEUNG, WHAT IS THE MAYBE_CHROME_INCOGNITO BIT?

23 A. IT'S AN OUTPUT OF THE HEURISTIC.

24 Q. AND WHAT IS CONTAINED WITHIN THE MAYBE_CHROME_INCOGNITO
25 BIT?

1 A. THAT BIT IS A BOOLEAN VALUE, WHICH IS EITHER A TRUE OR
2 FALSE.

3 Q. WHY IS IT CALLED A MAYBE_CHROME_INCOGNITO BIT?

4 A. THAT PREFIX IS TO EMPHASIZE THIS BIT IS NOT A RELIABLE WAY
5 TO IDENTIFY CHROME INCOGNITO TRAFFIC.

6 Q. AND, MR. LEUNG, WHILE WE'VE REFERRED TO IT TODAY AS THE
7 MAYBE_CHROME_INCOGNITO BIT, IS THAT THE FULL NAME OF THE BIT?

8 A. NO.

9 Q. WHAT IS THE FULL NAME OF THE BIT?

10 A. MAYBE_CHROME_INCOGNITO_DO_NOT_USE_WITHOUT_CONSULTING_
11 ADS_IDENTITY_TEAM.

12 Q. AND WHY DID YOUR TEAM INCLUDE A SUFFIX IN THE BIT'S NAME
13 STATING DO_NOT_USE_WITHOUT_CONSULTING_THE_ADS_IDENTITY_TEAM?

14 A. THAT BIT IS NOT BUILT FOR GENERAL USAGE, SO IN ORDER TO
15 PREVENT MISUSE OF THAT BIT, WE ADD THE SUFFIX TO THAT SO THAT
16 ANY PEOPLE, ANY PEOPLE WHO WANT TO USE THE BIT FOR ANY OTHER
17 USAGES SHOULD FIRST CONSULT OUR TEAM.

18 Q. AND HAS ANYBODY EVER CONSULTED THE ADS IDENTITY TEAM ABOUT
19 USING THAT BIT?

20 A. NO.

21 Q. MR. LEUNG, IS THE MAYBE_CHROME_INCOGNITO BIT OR BOOLEAN
22 FIELD A SIGNAL SENT FROM CHROME TO GOOGLE?

23 A. CAN YOU REPEAT THE QUESTION?

24 Q. IS THE MAYBE_CHROME_INCOGNITO BIT A SIGNAL THAT'S SENT
25 FROM CHROME TO GOOGLE?

1 A. NO.

2 Q. AND WHAT TYPE OF INFORMATION IS CONTAINED IN THE
3 MAYBE_CHROME_INCOGNITO BIT?

4 A. IT'S THE BOOLEAN VALUE, SO IT'S EITHER TRUE OR FALSE.

5 Q. SO DOES THE MAYBE_CHROME_INCOGNITO BIT CONTAIN ANY
6 INFORMATION IDENTIFYING USERS INDIVIDUALLY?

7 A. NO.

8 Q. DID YOUR TEAM EVER ATTEMPT TO USE THE BIT TO IDENTIFY
9 INDIVIDUAL USERS BROWSING IN INCOGNITO MODE?

10 A. NO.

11 Q. WHY NOT?

12 A. WELL, FIRST OF ALL, IT'S TECHNICALLY NOT POSSIBLE BECAUSE
13 IT'S EITHER A TRUE OR FALSE VALUE.

14 SECOND, WE DO NOT HAVE ANY USAGE FOR THAT, NEED TO DO
15 THAT.

16 Q. MR. LEUNG, AS PART OF THESE PROJECTS YOU'RE DESCRIBING
17 TODAY, DID YOUR TEAM EVER ATTEMPT TO IDENTIFY ANY PARTICULAR
18 USERS AT ALL WHO WERE BROWSING IN INCOGNITO MODE?

19 A. NO.

20 Q. DID YOUR TEAM EVER ATTEMPT -- I'M SPEEDING UP BECAUSE OF
21 THE TIME RESTRAINTS.

22 DID YOUR TEAM EVER ATTEMPT TO LINK TRAFFIC THAT DID NOT
23 HAVE AN X-CLIENT DATA HEADER WITH A PARTICULAR I.P. ADDRESS?

24 A. NO.

25 Q. DID YOUR TEAM EVER ATTEMPT TO LINK TRAFFIC THAT DID NOT

1 HAVE AN X-CLIENT DATA HEADER WITH A PARTICULAR GAIA ID?

2 A. NO.

3 Q. DID YOUR TEAM EVER ATTEMPT TO LINK TRAFFIC THAT DID NOT
4 HAVE AN X-CLIENT DATA HEADER WITH ANYTHING AT ALL THAT WOULD
5 IDENTIFY A PARTICULAR PERSON?

6 A. NO.

7 Q. MR. LEUNG, FOR THE DATA FLOW AT ISSUE IN THIS CASE WHERE
8 USERS AREN'T SIGNED INTO THEIR GOOGLE ACCOUNTS, THEY'RE USING A
9 BROWSER IN PRIVATE BROWSING MODE TO VISIT A WEBSITE AND THAT
10 WEBSITE USES GOOGLE SERVICES, CAN THE MAYBE_CHROME_INCOGNITO
11 BIT IDENTIFY INDIVIDUAL USERS?

12 A. NO. AS YOU SAID, IT'S NOT SIGNED IN, SO -- AND THE BIT
13 ITSELF IS JUST A TRUE OR FALSE VALUE, SO IT'S NOT POSSIBLE.

14 Q. ARE YOU AWARE OF GOOGLE MAINTAINING ANY PROFILES THAT
15 COMBINE --

16 THE COURT: LAST QUESTION, MR. ANSORGE.

17 MR. ANSORGE: YES, YOUR HONOR. THIS IS THE LAST
18 QUESTION AS WELL.

19 Q. ARE YOU AWARE OF GOOGLE MAINTAINING ANY PROFILES THAT
20 CONTAINED LOGGED OUT PRIVATE BROWSING ACTIVITY FROM SEPARATE
21 BROWSING SESSIONS?

22 A. NO.

23 MR. ANSORGE: THANK YOU.

24 THE COURT: CROSS-EXAM.

25 MR. MCGEE: THANK YOU.

CROSS-EXAMINATION

BY MR. MCGEE:

Q. MR. LEUNG, ON YOUR DIRECT EXAMINATION, YOU SAID THAT THE BIT WAS RELIABLE ENOUGH; CORRECT?

A. NO, I DIDN'T SAY THAT.

Q. YOU DIDN'T SAY THAT THE BIT WAS GOOD ENOUGH FOR THE PROJECT?

A. THE BIT IS GOOD ENOUGH FOR THE PROJECT.

Q. BUT YOUR TESTIMONY IS YOU DID NOT SAY THAT IT WAS RELIABLE ENOUGH FOR THAT PROJECT?

A. IT'S -- WELL, IT'S GOOD ENOUGH FOR THE PROJECT.

BUT THE BIT ITSELF IS NOT A RELIABLE WAY TO IDENTIFY CHROME INCOGNITO.

Q. RIGHT. SO IF I CAN PULL UP EXHIBIT 87. AND THE -- YEAH, THE TOP PART. THANK YOU.

RIGHT HERE, ON MAY 15TH, 2020, WHICH WAS TWO WEEKS BEFORE WE FILED THIS LAWSUIT, YOU'RE SPEAKING WITH OTHERS ON YOUR TEAM AND YOUR ENGINEER THAT YOU SUPERVISE, BERT LEUNG, SAID THAT THE GROUND TRUTH FOR THE ANALYSIS THAT YOUR TEAM WAS GOING TO BE CONDUCTING WAS THE 3.08 PERCENT; CORRECT?

I'M SORRY, YOU WROTE THAT. EXCUSE ME.

A. WELL, THIS IS WHAT I SAID.

Q. RIGHT. SO YOU WROTE THAT THE 3.08 PERCENT WAS A GROUND TRUTH FOR THE PROJECT THAT YOU, MANDY LIU, AND OTHERS ON YOUR TEAM WERE GOING TO BE CONDUCTING, CORRECT, WITH THE

1 MAYBE_CHROME_INCOGNITO BIT?

2 A. ACCORDING TO THIS EMAIL, THIS IS THE GROUND TRUTH FOR THE
3 ANALYSIS.

4 Q. RIGHT. AND THAT'S AN EMAIL THAT YOU AUTHORED ON MAY 15TH
5 OF 2020; CORRECT?

6 A. YES.

7 Q. OKAY. AND THEN IF I CAN BRING UP EXHIBIT 88, AND THE
8 NOTES FROM JANUARY 27TH OF 2022.

9 YOU AND MANDY LIU MET, AND THESE ARE MINUTES FROM YOUR
10 MEETINGS; CORRECT?

11 A. YES.

12 Q. AND MANDY LIU, OR YOU, WROTE THAT THE INCOGNITO RATE WAS
13 STILL TOO HIGH; CORRECT?

14 A. THIS IS WHAT MANDY WROTE, YES.

15 Q. OKAY. AND THIS WAS BASED ON WHICH INCOGNITO DETECTION
16 BIT?

17 A. THIS SHOULD BE BASED ON THE EXTENSION OF THE PROJECT, SO
18 MAYBE_CHROME_INCOGNITO BIT.

19 Q. OKAY, SO THE MAYBE_CHROME_INCOGNITO BIT.

20 AND THEN SIX DAYS LATER, OR MAYBE SEVEN DAYS LATER, ON
21 FEBRUARY 3RD, WHO WROTE, "GOOD NEWS: CHROME INCOGNITO RATE IS
22 3 PERCENT."

23 WAS THAT YOU OR MS. LIU?

24 A. IT SHOULD BE MS. LIU.

25 Q. OKAY. SO MS. LIU, USING THE MAYBE_CHROME_INCOGNITO BIT,

1 FOUND THAT THE 3 PERCENT EQUALLED TO THE GROUND TRUTH FROM
2 EXHIBIT 87; CORRECT?

3 A. THE NUMBER ITSELF LOOKS THE SAME.

4 Q. RIGHT. AND EARLIER YOU TESTIFIED ON YOUR DIRECT
5 EXAMINATION THAT THE BIT IS A BOOLEAN BIT; CORRECT?

6 A. YES.

7 Q. SO IT'S A TRUE/FALSE?

8 A. IT'S EITHER TRUE OR FALSE.

9 Q. OKAY. AND WITH JUST THAT BIT, YOU TESTIFIED THAT YOU
10 WOULD NOT BE ABLE TO IDENTIFY USERS; CORRECT?

11 A. YES.

12 Q. BUT THOSE BITS ARE CONTAINED IN OTHER LOGS; CORRECT?

13 A. CAN YOU SAY THAT AGAIN?

14 Q. THOSE BITS ARE CONTAINED IN LOGS; CORRECT?

15 A. YES.

16 Q. AND THOSE LOGS HAVE ADDITIONAL INFORMATION; CORRECT?

17 A. YES.

18 Q. SUCH AS IDENTIFIERS?

19 A. THERE CAN BE IDENTIFIERS. BUT IF YOU'RE TALKING ABOUT
20 GAIA ID, AS LONG AS THE USER IS NOT SIGNED IN, I DON'T THINK
21 THERE'S GAIA ID THERE.

22 Q. NO. BUT THERE ARE IDENTIFIERS IN THOSE LOGS THAT ALSO
23 CONTAIN A TRUE OR FALSE STATEMENT FOR THAT BIT; CORRECT?

24 A. I DON'T QUITE UNDERSTAND THE QUESTION. CAN YOU SAY AGAIN?

25 Q. SO THERE'S A LOG, AND IT CONTAINS MULTIPLE DATA SOURCES;

1 CORRECT? OR MULTIPLE DATA POINTS? CAN WE SAY THAT, DATA
2 FIELDS?

3 A. LOGS THAT CONTAIN MULTIPLE DATA FIELDS.

4 Q. RIGHT. ONE OF THEM WOULD BE LABELED THE
5 MAYBE_CHROME_INCOGNITO FIELD; CORRECT?

6 A. IF THE LOG CONTAINS THAT, YES.

7 Q. AND THAT WOULD BE A TRUE OR FALSE VALUE; CORRECT?

8 A. YES.

9 Q. AND THEN IN OTHER PARTS OF THAT LOG, THERE WOULD BE, FOR
10 EXAMPLE, A BISCOTTI ID; CORRECT?

11 A. THERE COULD BE BISCOTTI ID, YES.

12 Q. THERE COULD BE A UID; CORRECT?

13 A. I DON'T KNOW WHAT THE UID MEAN.

14 Q. WHAT ABOUT A CRMID, HAVE YOU EVER HEARD OF THAT?

15 A. I'VE HEARD OF THAT, BUT I DON'T KNOW WHETHER IT'S LOG OR
16 NOT.

17 Q. OKAY. BUT THE POINT IS THAT THE INCOGNITO DETECTION BIT,
18 MAYBE_CHROME_INCOGNITO, CAN EXIST IN LOGS THAT HAVE
19 IDENTIFIERS; CORRECT?

20 A. CAN YOU CLARIFY WHAT YOU MEAN BY "IDENTIFIERS"?

21 Q. BISCOTTI IDENTIFIER?

22 A. IT COULD BE.

23 Q. GAIA IDENTIFIER?

24 A. ONLY IF THE USER SIGNED IN.

25 Q. OKAY. BUT IF THE USER IS SIGNED IN, A GAIA IDENTIFIER

1 WOULD BE IN THE SAME LOG AS THE INCOGNITO DETECTION BIT THAT
2 YOU AND MANDY LIU USED TO GET TO THE GROUND TRUTH OF 3.08
3 PERCENT; CORRECT?

4 A. SO IF THE USER IS SIGNED IN, THEN, YEAH, THE GAIA WOULD BE
5 THERE.

6 BUT THEN, SURE, THE MAYBE_CHROME_INCOGNITO BIT WOULD BE
7 LOGGED. THAT COULD BE AGGREGATE, SO THAT COULD BE THE
8 AGGREGATE THAT GOES TO 3 PERCENT, WHICH LOOKS SIMILAR TO THE
9 PREVIOUS ONE NUMBER THAT THE CHROME ENGINEER PROVIDED TO ME.

10 BUT THERE'S NO GUARANTEE THAT IT'S ACTUALLY THE SAME 3
11 PERCENT OF THE REQUEST.

12 Q. AND WHAT ABOUT PPID'S? HAVE YOU EVER HEARD OF THOSE?

13 A. I'VE HEARD OF THAT.

14 Q. I'M SORRY?

15 A. I'VE HEARD OF IT.

16 Q. AND THOSE ARE THE PUBLISHER PROVIDED IDENTIFIERS; CORRECT?

17 A. TO MY KNOWLEDGE, IT STANDS FOR PUBLISHER PROVIDED
18 IDENTIFIER.

19 Q. AND THOSE CAN ALSO EXIST IN LOGS WITH THE
20 MAYBE_CHROME_INCOGNITO BIT?

21 A. I AM NOT AWARE OF WHERE IT IS LOGGED, SO I DON'T KNOW.

22 Q. OKAY. YOU DON'T KNOW; RIGHT?

23 A. I DON'T KNOW.

24 Q. OKAY. AND, MR. LIAO, EARLIER YOU TESTIFIED THAT THE IOS
25 CHROME BROWSERS DON'T SEND THE X-CLIENT DATA HEADER. YOU SAID

1 THAT WAS TO THE BEST OF YOUR KNOWLEDGE; CORRECT?

2 A. YES.

3 Q. WHO DID YOU SPEAK WITH TO OBTAIN THAT KNOWLEDGE?

4 A. IT SHOULD BE A CHROME ENGINEER.

5 Q. WHO?

6 A. PROBABLY FLORIAN.

7 Q. WHEN DID YOU SPEAK WITH FLORIAN UUNK TO OBTAIN THAT
8 INFORMATION?

9 A. PROBABLY SOMETIME IN 2019 OR 2020.

10 Q. DID YOU REVIEW ANY DOCUMENTS TO CONFIRM WHAT MS. UUNK
11 SAID?

12 A. SAY THAT AGAIN.

13 Q. DID YOU REVIEW ANY DOCUMENTS TO CONFIRM YOUR DISCUSSION
14 WITH FLORIAN UUNK?

15 A. NO.

16 MR. MCGEE: OKAY.

17 YOUR HONOR, MAY I HAVE ONE MOMENT?

18 THE COURT: YES.

19 (DISCUSSION OFF THE RECORD BETWEEN PLAINTIFFS' COUNSEL.)

20 MR. MCGEE: THANK YOU, JUDGE. I HAVE NO FURTHER
21 QUESTIONS.

22 THE COURT: THANK YOU.

23 ALL RIGHT. MR. LEUNG, YOU'RE FINISHED. YOU MAY STEP
24 DOWN.

25 THE WITNESS: THANK YOU.

1 THE COURT: THANK YOU.

2 CALL YOUR NEXT WITNESS.

3 MR. SCHAPIRO: YOUR HONOR, GOOGLE CALLS
4 ANDRE GOLUEKE.

5 THE COURT: MR. GOLUEKE, COME UP HERE TO THE WITNESS
6 BOX, PLEASE.

7 REMAIN STANDING. RAISE YOUR RIGHT HAND.

8 **(DEFENDANT'S WITNESS, ANDRE GOLUEKE, WAS SWORN.)**

9 THE WITNESS: I DO.

10 THE CLERK: HAVE A SEAT.

11 THE COURT: PLEASE STATE YOUR FULL NAME.

12 THE WITNESS: ANDRE GOLUEKE.

13 THE COURT: THANK YOU.

14 **DIRECT EXAMINATION**

15 BY MR. SCHAPIRO:

16 Q. MR. GOLUEKE, HOW LONG HAVE YOU WORKED FOR GOOGLE?

17 A. IT'LL BE 11 YEARS IN JULY.

18 Q. AND WHAT IS YOUR CURRENT ROLE AT GOOGLE?

19 A. I'M A STRATEGY AND OPERATIONS LEAD.

20 Q. AND WHAT DO YOU DO IN THAT CAPACITY?

21 A. I MANAGE THE TECHNICAL OPERATIONS TEAM. WE FOCUS ON THE
22 PROCESSING AND COLLECTION, PRODUCTION OF DOCUMENTS FOR
23 REGULATORY INVESTIGATIONS, INTERNAL INVESTIGATIONS, LITIGATION,
24 THAT KIND OF THING.

25 AND I ALSO MANAGE A TEAM THAT DOES STRATEGY AND

1 OPERATIONAL SUPPORT FOR THE BROAD ORGANIZATION, WHICH INCLUDES
2 DISCOVERY AND LAW ENFORCEMENT INVESTIGATION SUPPORT AS WELL.

3 Q. AND OVER THE 10-PLUS YEARS THAT YOU'VE WORKED AT GOOGLE,
4 APPROXIMATELY HOW MANY CASES HAVE YOU WORKED ON?

5 A. I DON'T KNOW THE EXACT NUMBER. IT'S EITHER DOZENS OR AS
6 MANY AS HUNDREDS.

7 Q. WHEN DID YOU FIRST BECOME INVOLVED IN DISCOVERY IN WHAT
8 I'LL CALL THE CHROME PRIVACY MATTERS, THE CALHOUN AND BROWN
9 CASES?

10 A. AROUND THE TIME OF MY INITIAL DECLARATION FOR THE CALHOUN
11 MATTER, WHICH WAS FEBRUARY OF 2021.

12 Q. AND SO -- WELL, STRIKE THAT.

13 WHAT HAS BEEN YOUR INVOLVEMENT SINCE THAT FEBRUARY 2021
14 DECLARATION?

15 A. I RECEIVED PERIODIC UPDATES ABOUT BOTH THE CALHOUN AND
16 BROWN MATTERS.

17 AND THEN I ALSO SUBMITTED A DECLARATION IN NOVEMBER 2021
18 FOR THE BROWN MATTER, AND I DID ANOTHER ONE A FEW WEEKS AGO AS
19 WELL.

20 Q. NOW, REFERRING BACK TO THE FEBRUARY 2021 DECLARATION THAT
21 YOU SUBMITTED IN THE CALHOUN CASE, WHAT WAS THE PURPOSE OF THAT
22 DECLARATION, IF YOU RECALL?

23 A. I BELIEVE IT WAS BURDEN ASSOCIATED WITH CATEGORICAL
24 PRESERVATION OF MY ACTIVITY, ANALYTICS, AND CERTAIN DISPLAY ADS
25 LOGS.

1 Q. AND WHEN YOU WERE PREPARING THAT DECLARATION, HOW DID YOU
2 GO ABOUT DETERMINING THE BURDEN OF PRESERVING THESE LOGS FOR MY
3 ACTIVITY, ANALYTICS, AND DISPLAY ADS?

4 A. IT WAS A -- IT WAS A MATTER OF -- WE LOOKED AT PLAINTIFFS'
5 CLAIMS AND THEIR CLASS DEFINITION TO DETERMINE WHAT WAS
6 POTENTIALLY IN SCOPE, WHICH AS YOU MENTIONED WAS ANALYTICS, MY
7 ACTIVITY, AND -- ANALYTICS AND DISPLAY ADS LOGS.

8 THEN WE IDENTIFIED ENGINEERS ON THOSE VARIOUS TEAMS OR
9 PRODUCT MANAGERS.

10 AND THEN I SCHEDULED MEETINGS TO TALK TO THOSE ENGINEERS
11 OR PRODUCT MANAGERS FROM THOSE VARIOUS TEAMS AND WE DISCUSSED
12 WHAT WAS POTENTIALLY IN SCOPE FOR THIS MATTER AND THE POTENTIAL
13 SIZE OF THOSE LOGS.

14 Q. NOW, HOW ABOUT -- THAT WAS IN THE CALHOUN CASE; CORRECT?

15 A. CORRECT.

16 Q. HOW ABOUT IN THE BROWN CASE, THIS CASE? I THINK YOU
17 MENTIONED YOU SUBMITTED A DECLARATION IN NOVEMBER OF LAST YEAR;
18 CORRECT?

19 A. THAT'S CORRECT.

20 Q. SO WHAT WAS THAT DECLARATION ABOUT? WHAT WAS THE ORIGIN
21 OF THAT?

22 A. THAT WAS IN RESPONSE TO THE SPECIAL MASTER'S ORDER, AND
23 WHAT WE DID THERE IS I REFRESHED MY MEMORY FROM MY DISCUSSIONS
24 WITH THOSE ENGINEERS AND PRODUCT MANAGERS FROM CALHOUN AND
25 CONTINUED TO WORK WITH THOSE INDIVIDUALS TO COME UP WITH THIS

1 LIST OF LOGS THAT WAS POTENTIALLY RELEVANT.

2 Q. AND WHEN YOU JUST DESCRIBED THE SPECIAL MASTER'S ORDER, IS
3 IT POSSIBLE YOU'RE THINKING OF THE NOVEMBER 12TH ORDER FROM THE
4 MAGISTRATE JUDGE, JUDGE VAN KEULEN?

5 A. YES. I'M SORRY.

6 Q. MR. GOLUEKE, AND SO IN -- WELL, LET ME ASK YOU FIRST, WHY
7 WOULD YOU BE A LOGICAL PERSON TO PREPARE SUCH A DECLARATION?

8 A. I THINK A NUMBER OF REASONS. ONE IS THERE IS NO SINGLE
9 INDIVIDUAL THAT IS FAMILIAR WITH ALL LOGS ACROSS ALL OF GOOGLE.

10 SO IN THIS CASE I MET WITH SEVERAL INDIVIDUALS FROM THE
11 AFOREMENTIONED TEAMS TO EDUCATE MYSELF ABOUT THOSE LOGS AND
12 PROVIDE A CENTRALIZED SOURCE TO DECLARE.

13 I ALSO HAVE ALMOST 11 YEARS OF EXPERIENCE IN
14 IDENTIFICATION OF DATA SOURCES ACROSS MY TIME AT GOOGLE.

15 AND I ALSO HAVE SOME EXPERIENCE DRAFTING SOME OF THE
16 DOCUMENTATION BY WHICH LEGAL WILL PLACE CERTAIN LOGS ON HOLD.

17 Q. AND IN DETERMINING WHICH ENGINEERS TO SPEAK TO, DID YOU
18 HAVE OCCASION TO LOOK AT THE COMPLAINT, OR ANY PARTS OF THE
19 COMPLAINT, THE OPERATIVE COMPLAINT AT THE TIME IN THIS CASE?

20 MS. FANTHORPE, WE MIGHT WANT TO DISPLAY ONE DOCUMENT.

21 A. I DID, YES.

22 Q. AND WHAT DID YOU LOOK AT AND WHY?

23 A. IT'S BEING SHOWN HERE. THE COMPLAINT LISTS, AS PART OF
24 THE CLASS DEFINITION, USERS THAT WERE IN PRIVATE BROWSING THAT
25 WENT TO THIRD PARTY WEBSITES THAT WERE UTILIZING AD MANAGER OR

1 GOOGLE ANALYTICS.

2 Q. AND SO AFTER YOU HAD FAMILIARIZED YOURSELF WITH THE CLASS
3 DEFINITION AT THE TIME, HOW DID THAT AFFECT YOUR DECISION ABOUT
4 WHO TO GO SPEAK TO?

5 A. WELL, I KNEW THAT IT WAS ABOUT ANALYTICS AND AD MANAGER,
6 SO I WENT AND SPOKE TO INDIVIDUALS FROM THE [REDACTED] OR MY
7 ANALYTICS TEAM, ALSO ANALYTIC, AND AD MANAGER TEAMS OR DISPLAY
8 ADS SEPARATELY.

9 Q. AND WHAT PEOPLE DID YOU SPEAK WITH?

10 A. I MET WITH DAN STONE FROM THE ANALYTICS TEAM. HE'S A
11 PROGRAM MANAGER, OR PRODUCT MANAGER.

12 I ALSO MET WITH DAVE MONSEES, WHO WAS A PRODUCT MANAGER OF

13 [REDACTED] AND ANALYTICS, BUT FOCUSES ON PRIVACY AND USER DATA.

14 AND THEN I ALSO SPOKE TO BEN KORNACKI, WHO IS AN ENGINEER
15 ON THE DISPLAY ADS TEAM.

16 Q. AND IN THE DECLARATION THAT YOU'VE SUBMITTED IN CONNECTION
17 WITH THIS PROCEEDING, THE SANCTIONS PROCEEDING, YOU TALKED
18 ABOUT SEARCHING FOR LOGS AND OTHER SOURCES THAT CONTAINED EVENT
19 LEVEL USER DATA RELEVANT TO THE PRODUCTS AND CLAIMS AT ISSUE.

20 WHAT IS EVENT LEVEL USER DATA?

21 A. DATA GENERATED BY USER ACTIONS. SO, FOR EXAMPLE, CLICKING
22 ON AN AD.

23 Q. SO AFTER YOUR CONVERSATIONS WITH GOOGLE ENGINEERS AND
24 PRODUCT MANAGERS, WERE THERE ANY CATEGORIES OF LOG SOURCES THAT
25 YOU, THAT YOU RULED OUT FOR YOUR RESPONSE TO THE COURT ORDER?

1 A. YEAH. ONE, ONE EXAMPLE IS P LOGS, OR PERSONAL LOGS. SO
2 BECAUSE THE CLASS DEFINITION WAS ABOUT PRIVATE BROWSING, I KNEW
3 THAT P LOGS WEREN'T GOING TO BE AN ISSUE BECAUSE THOSE RELATE
4 TO SIGNED IN OR SENT USERS.

5 Q. WHEN YOU WERE LOOKING FOR RELEVANT DATA SOURCES, DID YOU
6 SEARCH BY FIELD? DID YOU SEARCH FOR ANY PARTICULAR -- FOR DATA
7 SOURCES CONTAINING ANY PARTICULAR FIELD?

8 A. NO. TO MY KNOWLEDGE, THERE IS NO TOOL AT GOOGLE THAT
9 ALLOWS YOU TO SEARCH LIMITING TO JUST FIELD NAMES, NOT TO
10 MENTION THERE ARE [REDACTED] OF POTENTIAL DATA SOURCES,
11 AND WITHIN THOSE, [REDACTED]
12 [REDACTED] OF INDIVIDUAL FIELDS.

13 SO IT'S BEEN MY EXPERIENCE THAT THE MOST EXPEDITIOUS AND
14 BEST WAY TO DO THIS IS TO SPEAK TO ENGINEERS AND PRODUCT
15 MANAGERS FROM THOSE VARIOUS PRODUCTS AS THEY ARE MOST
16 KNOWLEDGEABLE -- EXCUSE ME -- MOST KNOWLEDGEABLE ABOUT THEIR
17 PRODUCTS.

18 Q. ARE YOU AWARE THAT THE PLAINTIFFS ARE CLAIMING YOUR
19 NOVEMBER 18TH DECLARATION WAS DEFICIENT BECAUSE IT DID NOT
20 INCLUDE THE MAYBE_CHROME_INCOGNITO OR THE
21 IS_CHROME_NON_INCOGNITO OR THE IS_CHROME_INCOGNITO BITS?

22 A. I AM.

23 Q. AND JUST BECAUSE WE'RE SHORT ON TIME, I'LL ASK YOU TO
24 ADDRESS THEM TOGETHER. WHY DIDN'T YOUR NOVEMBER 18TH
25 DECLARATION LIST FIELDS -- EXCUSE ME -- LOGS, DATA SOURCES,

1 INCLUDING THOSE BITS, THOSE FIELDS?

2 A. I WAS NOT AWARE OF THOSE FIELDS AT THE TIME OF THAT
3 DECLARATION.

4 SECOND, AGAIN, WE -- THERE'S NO WAY, AS FAR AS I KNOW, NO
5 TOOL THAT WILL ALLOW YOU TO SEARCH BY FIELD NAME ACROSS ALL OF
6 THE RELEVANT -- ACROSS ALL OF THE DATA SOURCES ACROSS ALL OF
7 GOOGLE.

8 AND THEN, THIRD, I UNDERSTAND THAT SOME OF THE -- THAT THE
9 IS_CHROME_INCOGNITO AND IS_CHROME_NON_INCOGNITO RELATE TO THE
10 PREVIOUSLY IDENTIFIED SEARCH LOGS, WHICH WERE NOT IN SCOPE
11 BASED ON THE CLASS DEFINITION.

12 THE COURT: LAST QUESTION.

13 MR. SCHAPIRO: MY LAST QUESTION.

14 Q. MR. GOLUEKE, DID ANYONE AT GOOGLE, ANY LAWYER, OR ANYONE
15 ELSE, ASK OR DIRECT YOU TO OMIT ANY DATA SOURCES FROM YOUR
16 DECLARATION?

17 A. NO.

18 MR. SCHAPIRO: THANK YOU.

19 THE COURT: CROSS-EXAM.

20 MR. BOIES: THANK YOU, YOUR HONOR.

21 **CROSS-EXAMINATION**

22 BY MR. BOIES:

23 Q. GOOD AFTERNOON, MR. GOLUEKE. MY NAME IS DAVE BOIES, AND I
24 REPRESENT THE PLAINTIFFS.

25 DID YOU UNDERSTAND AT THE TIME THAT YOU DID YOUR NOVEMBER

1 DECLARATION THAT TRACKING OR ESTIMATING CHROME INCOGNITO USAGE
2 WAS RELEVANT TO THIS CASE?

3 A. CAN YOU ASK THAT AGAIN?

4 Q. SURE. AT THE TIME THAT YOU DID YOUR DECLARATION IN THIS
5 CASE IN NOVEMBER OF 2021, DID YOU UNDERSTAND THAT THE TRACKING
6 OR ESTIMATING OF CHROME INCOGNITO USAGE WAS RELEVANT?

7 A. AGAIN, I -- I BASED MY DISCUSSIONS WITH THOSE ENGINEERS
8 BASED ON THE CLASS DEFINITION, WHICH WAS PRIVATE BROWSING ON
9 THIRD PARTY WEBSITES UTILIZING AD MANAGER OR ANALYTICS.

10 SO I FOCUSSED ON ANALYTIC, AD MANAGER, AND THE [REDACTED]
11 LOGS.

12 Q. NOT MY QUESTION, SIR.

13 MY QUESTION IS WHETHER YOU UNDERSTOOD AT THE TIME OF YOUR
14 DECLARATION THAT THE TRACKING OR ESTIMATING OF CHROME INCOGNITO
15 USAGE WAS RELEVANT TO THIS CASE.

16 A. BASED ON THE PRIVATE BROWSING SECTION OF THAT CLASS
17 DEFINITION, I WOULD SAY YES.

18 Q. YOU WOULD SAY YES?

19 AND DID YOU UNDERSTAND AT THE TIME OF YOUR DECLARATION
20 THAT GOOGLE ATTEMPTED TO TRACK OR ESTIMATE CHROME INCOGNITO
21 USAGE?

22 A. NO.

23 Q. YOU DIDN'T UNDERSTAND THAT?

24 A. I DIDN'T KNOW THAT.

25 Q. DID YOU ASK ANYBODY?

1 A. I DON'T RECALL.

2 Q. WELL, YOU KNEW THAT IT WAS RELEVANT; CORRECT? YOU SAID
3 THAT.

4 A. UM-HUM.

5 Q. RIGHT?

6 A. YES.

7 Q. AND IN PREPARING YOUR DECLARATION, DID YOU TRY TO FIND OUT
8 FROM ANYBODY WHETHER GOOGLE WAS ACTUALLY DOING THAT?

9 A. NO, I DON'T -- I DON'T THINK SO.

10 Q. OKAY. NOW, COUNSEL ASKED YOU WHETHER ANY LAWYER
11 REPRESENTING GOOGLE ASKED YOU TO OMIT SOMETHING.

12 DO YOU RECALL THAT?

13 A. YES.

14 Q. DID ANY LAWYER FROM GOOGLE ADVISE YOU AS TO WHAT WAS
15 RELEVANT IN THIS CASE?

16 A. I SPOKE WITH COUNSEL. I DON'T RECALL EXACTLY WHAT
17 COMMUNICATIONS WE HAD ABOUT THIS MATTER.

18 I KNOW THAT I BASED MOST OF MY DISCUSSION WITH ENGINEERS
19 ON THE CLASS DEFINITION.

20 Q. BUT YOU'RE NOT A LAWYER; CORRECT?

21 A. THAT'S CORRECT.

22 Q. AND WHAT I'M ASKING YOU IS, DID YOU GET ANY ADVICE FROM
23 ANY OF THE LAWYERS ON THIS CASE AS TO WHAT WAS RELEVANT TO THIS
24 CASE?

25 A. I THINK WE HAD SOME DISCUSSIONS ABOUT THAT.

1 Q. AND WHAT DID THEY TELL YOU WAS RELEVANT?

2 MR. SCHAPIRO: OBJECTION. PRIVILEGE.

3 MR. BOIES: YOUR HONOR, I THINK THAT IF HE'S BASING
4 THAT ON HIS DECLARATION, I'M ENTITLED TO KNOW WHAT HIS, WHAT
5 HIS BASIS IS.

6 THE COURT: ASKING HIM SPECIFICALLY WHAT COUNSEL SAID
7 TO HIM IS PRIVILEGED. I'LL SUSTAIN THE OBJECTION.
8 BY MR. BOIES:

9 Q. WERE YOU AWARE, AT THE TIME THAT YOU DID YOUR DECLARATION,
10 THAT THERE WERE ANY LOGS THAT CONTAINED INCOGNITO DETECTION
11 FIELDS?

12 A. NO.

13 Q. DID YOU ASK ANYONE WHETHER THERE WERE ANY LOGS THAT
14 CONTAINED INCOGNITO DETECTION FIELDS?

15 A. I DON'T RECALL.

16 Q. IN PREPARATION FOR YOUR DECLARATION, DID YOU EVER TALK TO
17 MR. CHRIS LIAO?

18 A. NO.

19 Q. CAITLIN SADOWSKI?

20 A. AT THE TIME OF THAT DECLARATION, NO.

21 Q. BERT LEUNG?

22 A. NO.

23 Q. MANDY LIU?

24 A. NO.

25 Q. IVAN PETROV?

1 A. NO.

2 Q. HUA LUO?

3 A. NO.

4 Q. QUENTIN FIARD?

5 A. NO.

6 Q. PRIOR TO SUBMITTING YOUR DECLARATION, DID YOU EVER ASK
7 ANYBODY WHETHER THERE WAS ANYBODY IN GOOGLE WHO WAS WORKING ON
8 THE TRACKING OR ESTIMATING OF CHROME INCOGNITO USAGE?

9 A. NOT THAT I RECALL.

10 Q. DID YOU EVER REVIEW THE JULY 9, 2021 SUBMISSION BY
11 PLAINTIFFS IN THIS CASE AS TO INFORMATION THAT THEY WERE
12 SEEKING?

13 A. I DON'T -- I DON'T RECALL.

14 Q. ON -- DID YOU EVER REVIEW ANY OF THE BRIEFS OR SUBMISSIONS
15 FROM PLAINTIFFS AS TO WHAT INFORMATION THEY WERE SEEKING IN
16 THIS CASE?

17 A. AGAIN, I LOOKED AT THE, THE ORIGINAL COMPLAINT AND THE
18 CLASS DEFINITION THEREIN.

19 Q. OTHER THAN LOOKING AT THE ORIGINAL COMPLAINT AND THE CLASS
20 DEFINITION, DID YOU LOOK AT ANY DOCUMENTS THAT SET FORTH WHAT
21 THE PLAINTIFFS WERE ASKING FOR IN THIS LITIGATION?

22 A. I BELIEVE I ALSO LOOKED AT THE ORDER, THE MAGISTRATE'S
23 ORDER.

24 Q. THIS IS THE ORDER THAT TOLD YOU TO IDENTIFY ALL THE DATA
25 SOURCES THAT WERE RELEVANT TO OUR CLAIMS; RIGHT?

1 A. CORRECT.

2 Q. BUT THAT ORDER DIDN'T DEFINE WHAT WAS RELEVANT TO OUR
3 CLAIMS; CORRECT?

4 A. I DON'T RECALL SPECIFICALLY.

5 Q. OTHER THAN THE ORIGINAL COMPLAINT'S CLASS DEFINITIONS, DID
6 YOU LOOK AT ANY OTHER DOCUMENT PREPARED BY THE PLAINTIFFS THAT
7 SET FORTH WHAT THE PLAINTIFFS BELIEVE WERE RELEVANT IN THIS
8 CASE?

9 A. I DON'T RECALL.

10 Q. NOW, I THINK YOU SAID ON DIRECT EXAMINATION THAT YOU WERE
11 NOW FAMILIAR WITH CERTAIN LOGS THAT CONTAINED THE INCOGNITO
12 DETECTION FIELDS. IS THAT CORRECT?

13 A. AT A HIGH LEVEL, YES.

14 Q. YOU ARE -- YOU ARE FAMILIAR THAT THERE ARE SUCH LOGS?

15 A. CORRECT.

16 Q. AND HOW DID YOU BECOME FAMILIAR WITH THOSE, WITH THE
17 EXISTENCE OF THOSE LOGS?

18 MR. SCHAPIRO: I'LL JUST CAUTION THE WITNESS NOT TO
19 REVEAL CONVERSATIONS -- THE CONTENT OF CONVERSATIONS WITH
20 COUNSEL.

21 BY MR. BOIES:

22 Q. DID YOU BECOME AWARE OF THE EXISTENCE OF THOSE LOGS FROM
23 ANY SOURCE OTHER THAN COUNSEL?

24 A. DO YOU MIND REPHRASING THAT?

25 Q. DID YOU BECOME AWARE OF THE EXISTENCE OF THESE LOGS THAT

1 CONTAINED THE INCOGNITO DETECTION FIELDS FROM ANY SOURCE OTHER
2 THAN COUNSEL?

3 A. YEAH, I HAVE SUBSEQUENTLY SPOKEN WITH BEN KORNACKI AND
4 CURT HARDING FROM THE DISPLAY ADS TEAM ABOUT SOME OF THOSE
5 LOGS, YES.

6 Q. AND THEY -- AND DID THEY TELL YOU THAT THERE WERE THESE
7 LOGS THAT CONTAINED THE INCOGNITO DETECTION BIT FIELDS?

8 A. YES.

9 Q. AND WHEN DID YOU HAVE THOSE CONVERSATIONS?

10 A. I DON'T RECALL THE EXACT DATES.

11 Q. BUT IT WOULD HAVE BEEN AFTER YOUR DECLARATION IS YOUR
12 TESTIMONY?

13 A. AFTER THE NOVEMBER 18TH DECLARATION, YES.

14 Q. AND IT IS YOUR TESTIMONY THAT PRIOR TO THE NOVEMBER 2021
15 DECLARATION, YOU DIDN'T ASK ANYBODY WHETHER SUCH LOGS EXISTED,
16 OR EVEN WHETHER THERE WERE ANY INCOGNITO DETECTION FIELDS?

17 MR. SCHAPIRO: OBJECTION. COMPOUND.

18 THE COURT: GO AHEAD. YOU CAN ANSWER.

19 THE WITNESS: I WAS FOCUSSED ON IDENTIFICATION OF
20 DATA SOURCES, NOT INDIVIDUAL FIELDS.

21 I WAS RELYING ON THE EXPERTISE OF ENGINEERS AND PRODUCT
22 MANAGERS ON THOSE VARIOUS TEAMS TO HELP ME IDENTIFY RELEVANT
23 LOGS, NOT INDIVIDUAL FIELDS.

24 BY MR. BOIES:

25 Q. AND WHEN YOU TALK ABOUT RELEVANT LOGS, YOU'RE TALKING

1 ABOUT THE LOGS THAT YOU CONSIDERED RELEVANT UNDER THE CLASS
2 DEFINITION; CORRECT, SIR?

3 A. YEAH, WHICH WAS PRIVATE BROWSING, THIRD PARTY WEBSITES.

4 Q. AND YOU DIDN'T ASK ANYBODY AS TO WHETHER THERE WERE PEOPLE
5 IN GOOGLE WHO WERE WORKING ON INCOGNITO DETECTION; CORRECT?

6 A. I THINK THAT'S RIGHT.

7 Q. DID YOU ASK ANYBODY IN GOOGLE WHETHER ANYONE WAS WORKING
8 ON TRACKING OR ESTIMATING PRIVATE BROWSING?

9 A. CAN YOU ASK THAT AGAIN? SORRY.

10 Q. DID YOU ASK ANYONE WITHIN GOOGLE AS TO WHETHER THERE WAS
11 ANYONE IN GOOGLE WHO WAS WORKING ON TRACKING OR ESTIMATING
12 PRIVATE BROWSING?

13 A. NOT THAT I RECALL.

14 Q. DID YOU UNDERSTAND THAT ONE OF THE THINGS THAT THE
15 PLAINTIFFS WERE INTERESTED IN HERE WAS WHETHER THERE WERE
16 PEOPLE IN GOOGLE WHO WERE TRYING TO ESTIMATE OR TRACK PRIVATE
17 BROWSING?

18 A. CAN YOU -- CAN YOU REPHRASE THAT AGAIN?

19 Q. DID YOU UNDERSTAND THAT THERE WERE EFFORTS BY THE
20 PLAINTIFFS TO FIND OUT INFORMATION AS TO WHETHER THERE WERE
21 PEOPLE IN GOOGLE WHO WERE TRYING TO ESTIMATE OR TRACK PRIVATE
22 BROWSING?

23 A. I DIDN'T KNOW THAT IN PARTICULAR.

24 THE COURT: LAST QUESTION, MR. BOIES.

25 MR. BOIES: THANK YOU, YOUR HONOR.

1 THE COURT: YOU MAY HAVE ONE MORE QUESTION.

2 MR. BOIES: I'LL PASS. THANK YOU.

3 THE COURT: OKAY. ALL RIGHT. THANK YOU.

4 THANK YOU, MR. GOLUEKE.

5 THE WITNESS: THANK YOU.

6 THE COURT: YOU MAY STEP DOWN.

7 MS. TREBICKA: YOUR HONOR, GOOGLE WILL CALL

8 DR. CAITLIN SADOWSKI.

9 THE COURT: THANK YOU.

10 MS. SADOWSKI, DR. SADOWSKI, COME RIGHT ON UP HERE AND BE
11 SEATED.

12 ACTUALLY, RAISE YOUR RIGHT HAND AND REMAIN STANDING. COME
13 ON UP.

14 TOO MANY DIRECTIONS. I'M SORRY. THERE YOU GO.

15 THE CLERK: PLEASE RAISE YOUR RIGHT HAND.

16 **(DEFENDANT'S WITNESS, CAITLIN SADOWSKI, WAS SWORN.)**

17 THE WITNESS: I DO.

18 THE CLERK: THANK YOU. HAVE A SEAT, PLEASE.

19 THE COURT: PLEASE STATE YOUR FULL NAME.

20 THE WITNESS: MY NAME IS DR. CAITLIN SADOWSKI. DO
21 YOU WANT ME TO SPELL IT?

22 THE COURT: I THINK WE'VE GOT IT. THANK YOU.

23 **DIRECT EXAMINATION**

24 BY MS. TREBICKA:

25 Q. DR. SADOWSKI, WHAT IS YOUR ROLE AT GOOGLE?

1 A. I LEAD THE CHROME DATA TEAM.

2 Q. AND WHAT DOES THE CHROME DATA TEAM DO?

3 A. SO WE'RE A CROSS-FUNCTIONAL TEAM CONSISTING OF ENGINEERS
4 AND ANALYSTS. WE OWN ALL THE INFRASTRUCTURE FOR COLLECTING IN
5 THE WILD METRICS ABOUT CHROME BROWSER USAGE, AND THEN WE ALSO
6 HELP PEOPLE ANSWER QUESTIONS ABOUT CHROME BROWSER USAGE.

7 Q. AND DO YOU LEAD THAT TEAM?

8 A. YES, I LEAD THAT TEAM.

9 Q. HOW MANY PEOPLE REPORT TO YOU?

10 A. ABOUT 30.

11 Q. NOW, DOES -- DO YOU KNOW WHAT THE X-CLIENT DATA HEADER IS?

12 A. YES.

13 Q. AND HOW HAVE YOU BECOME AWARE OF THE X-CLIENT DATA HEADER?

14 A. THE X-CLIENT DATA HEADER IS SENT BY -- AS PART OF
15 INFRASTRUCTURE OWNED BY MY TEAM IN ORDER TO CONVEY
16 EXPERIMENTATION STATE.

17 Q. DO YOU KNOW WHETHER CHROME SENDS THE X-CLIENT DATA HEADER
18 IN INCOGNITO MODE?

19 A. CHROME DOES NOT TYPICALLY SEND THE X-CLIENT DATA HEADER IN
20 INCOGNITO MODE.

21 Q. WHY IS THAT?

22 A. BECAUSE USER PRIVACY IS IMPORTANT AND WE DON'T WANT TO
23 HAVE ANY WAY TO BE TRACKING USERS BETWEEN INCOGNITO AND
24 NON-INCOGNITO MODE.

25 SO EVEN THOUGH THERE'S NOT A LOT OF INFORMATION IN THE

1 X-CLIENT DATA HEADER, WE DON'T SEND IT FOR PRIVACY REASONS.

2 Q. NOW, DOES CHROME, OR YOUR TEAM WITHIN CHROME, USE THE
3 ABSENCE OF THE X-CLIENT DATA HEADER TO DETECT INCOGNITO MODE?

4 A. WE DO NOT.

5 Q. DOES ANYBODY WITHIN CHROME USE THE ABSENCE OF THE X-CLIENT
6 DATA HEADER TO DETECT INCOGNITO MODE?

7 A. WE DO NOT.

8 Q. WHY NOT?

9 A. BECAUSE IT'S NOT A RELIABLE INDICATOR OF WHETHER SOMEONE
10 IS OR IS NOT IN INCOGNITO MODE.

11 Q. AS A CHROME ENGINEER AND THE LEADER OF THE CHROME METRICS
12 TEAM, CAN YOU TELL US ALL THE REASONS WHY THE ABSENCE OF THE
13 X-CLIENT DATA HEADER IS NOT A RELIABLE DETECTION TOOL FOR
14 INCOGNITO BROWSING?

15 A. EVEN I CAN'T TELL YOU ALL THE REASONS, BUT I CAN TELL YOU
16 SOME OF THE REASONS.

17 Q. THAT'S GOOD. LET'S -- JUST SO THE RECORD IS CLEAR, WHY
18 DON'T WE TAKE IT ONE BY ONE. TELL ME THE FIRST REASON THAT YOU
19 CAN THINK OF.

20 A. SO, FOR EXAMPLE, ON IOS, THE X-CLIENT DATA HEADER IS
21 TYPICALLY NOT SENT, EXCEPT IN SOME KINDS OF SEARCHES.

22 Q. AND WHAT IS --

23 A. AND NAVIGATIONS.

24 Q. UNDERSTOOD. WHAT IS ANOTHER REASON THAT THE X-CLIENT DATA
25 HEADER IS NOT SENT IN INCOGNITO MODE?

1 I'M SORRY. WHAT IS ANOTHER REASON THAT THE X-CLIENT DATA
2 HEADER IS NOT SENT AND THE USER IS NOT IN INCOGNITO MODE?

3 A. ANOTHER EXAMPLE IS DURING A FIRST RUN OF CHROME, IT'S
4 TYPICALLY NOT SENT, OR NOT SENT FOR I THINK MOST PLATFORMS.

5 SO FIRST RUN IS, LIKE, WHEN YOU HAVE JUST STARTED A NEW
6 INSTALL OF CHROME.

7 Q. OKAY. CAN YOU THINK OF ANOTHER REASON?

8 A. ANOTHER EXAMPLE IS, FOR EXAMPLE, BUGS OR PROBLEMS. IT'S
9 NOT SENT ANY TIME THAT IT'S EMPTY.

10 SO IF THERE'S A PROBLEM WITH GETTING THE EXPERIMENTATION
11 STATE OR UNDERSTANDING THE EXPERIMENTATION STATE, IT'S NOT
12 SENT.

13 AND IT'S NOT SENT IF IT'S EMPTY AND IS PUBLICLY AVAILABLE
14 CHROMIUM SOURCE CODE.

15 SO, LIKE, FOR EXAMPLE, WE DISCOVERED RECENTLY THAT THERE
16 WERE SOME USERS THAT HAD VERY OLD EXPERIMENTATION
17 CONFIGURATIONS AND WERE IN A WEIRD STATE.

18 Q. ANY OTHER REASONS WHY THE X-CLIENT DATA HEADER MAY NOT BE
19 SENT WHEN A USER IS NOT IN INCOGNITO MODE?

20 A. YEAH. SO IT'S ONLY SENT TO GOOGLE PROPERTIES, BUT IT'S
21 NOT SENT IF THERE'S REDIRECTS.

22 Q. AND WHAT DO YOU MEAN BY "REDIRECTS"?

23 A. LIKE IF YOU HAD A, ANOTHER PAGE THAT THEN, LIKE, TOOK YOU
24 TO A GOOGLE PAGE WITH, LIKE, TWO DIFFERENT REQUESTS, IT ONLY IS
25 LOOKING AT THE MAIN PAGES AS A GOOGLE PROPERTY.

1 Q. AND WITHOUT EXPLAINING THE OTHER REASONS, ARE THERE OTHER
2 REASONS THAT YOU KNOW OF THAT THE X-CLIENT DATA HEADER IS NOT
3 SENT, BUT THE USER IS NOT IN INCOGNITO MODE?

4 A. THOSE ARE THE BIGGEST. BUT THE, THE WHEN IS THE
5 EXPERIMENTATION STATE EMPTY, THAT COULD HAPPEN FOR A VARIETY OF
6 REASONS.

7 Q. OKAY. SO DO YOU KNOW HOW MANY TIMES THIS PHENOMENA
8 HAPPENS, WHICH IS THE X-CLIENT DATA HEADER IS NOT SENT AND,
9 YET, THE USER IS NOT IN CHROME INCOGNITO?

10 A. THAT WOULD BE -- I DON'T KNOW -- I DON'T KNOW THE NUMBER
11 OFF THE TOP OF MY HEAD, BUT IT IS NOT SMALL.

12 I MENTIONED IOS. MANY TIMES IN IOS, AND ALSO FIRST RUN,
13 THERE ARE MANY USERS THAT ARE USING CHROME FOR THE FIRST TIME
14 OR HAVE KIND OF REINSTALLED CHROME. I BELIEVE THERE'S
15 UTILITIES ON MOBILE THAT ACTUALLY JUST LET YOU REINSTALL
16 CHROME, AND SOME PEOPLE USE THEM ON A DAILY BASIS.

17 Q. WOULD YOU SAY THAT'S IN MILLIONS OF INSTANCES? I --

18 MR. MCGEE: OBJECTION. SPECULATION, YOUR HONOR.

19 THE COURT: I'LL ALLOW IT.

20 THE WITNESS: I WOULD CONSERVATIVELY SAY MILLIONS.

21 SO I WOULD EXPECT MORE THAN THAT.

22 BY MS. TREBICKA:

23 Q. IS THE PURPOSE OF THE X-CLIENT DATA HEADER TO MEASURE
24 INCOGNITO TRAFFIC?

25 A. NO, THAT IS NOT THE PURPOSE OF THE X-CLIENT DATA HEADER.

1 Q. HOW DOES YOUR TEAM, THE UMA TEAM, MEASURE INCOGNITO
2 STATISTICS?

3 A. SO MY TEAM WOULD REFER PEOPLE TO USE UMA IF THEY WANTED TO
4 UNDERSTAND STATISTICS ABOUT INCOGNITO USAGE. UMA IS VERY
5 PRIVACY PRESERVING, WHICH IS WHY IT'S THE DATA SET WE USE AND
6 WE STILL TRACK METRICS EVEN IN INCOGNITO MODE.

7 Q. WHAT DOES UMA STAND FOR?

8 A. USER METRICS ANALYSIS.

9 Q. AND THAT IS THE TEAM THAT YOU LEAD; CORRECT?

10 A. YES.

11 Q. CAN UMA DATA BE USED TO IDENTIFY INDIVIDUAL USERS?

12 A. NO. SO UMA DATA IS KEYED BY A CLIENT ID, WHICH ROUGHLY
13 CORRESPONDS TO A CHROME INSTALL. SO YOU COULD HAVE ONE USER,
14 LIKE, FOR EXAMPLE, MYSELF, I HAVE TWO DIFFERENT VERSIONS OF
15 CHROME RUNNING ON MY LAPTOP, A CANARY VERSION, LIKE AN EARLY
16 VERSION THAT MIGHT BE BUGGY, AND THEN THE MAIN, NORMAL CHROME
17 VERSION.

18 I ALSO HAVE A VERSION OF CHROME RUNNING ON MY PHONE, AND
19 ALL OF THOSE WILL HAVE DIFFERENT ID'S ASSOCIATED WITH THE SAME
20 PERSON, ME.

21 YOU COULD ALSO HAVE MULTIPLE PEOPLE USING THE SAME CHROME
22 INSTALL AND HAVE THE SAME CLIENT ID ASSOCIATED WITH MULTIPLE
23 PEOPLE.

24 Q. DOES GOOGLE JOIN THE UMA DATA WITH GOOGLE ACCOUNT
25 INFORMATION?

1 A. NO.

2 Q. WHY NOT?

3 A. THERE ISN'T A WAY TO DIRECTLY JOIN UMA DATA WITH GOOGLE
4 ACCOUNT INFORMATION. WE DO NOT HAVE A MAPPING FROM UMA CLIENT
5 ID'S TO GOOGLE USER NAMES.

6 Q. YOU RECALL THAT YOU WERE DEPOSED IN THE BROWN VERSUS
7 GOOGLE ACTION?

8 A. I DO RECALL.

9 Q. AND DO YOU RECALL THAT YOU PROVIDED TESTIMONY AS A
10 CORPORATE WITNESS?

11 A. YES.

12 Q. AND YOU PREPARED FOR THAT TESTIMONY?

13 A. YES.

14 Q. DO YOU RECALL THE TOPICS GENERALLY THAT YOU WERE ASKED
15 ABOUT?

16 A. I WAS ASKED ABOUT MANY TOPICS IN THE COURSE OF THE
17 DEPOSITION, BUT THAT INCLUDED SOME QUESTIONS ABOUT UMA, AND
18 ALSO ABOUT SEARCH LOGS IDENTIFIED FOR THIS PARTICULAR CASE.

19 Q. AND IN PARTICULAR, DID THE QUESTIONS REVOLVE AROUND
20 CERTAIN BITS, FIELDS, FOUND IN THESE IDENTIFIED SEARCH LOGS?

21 A. YES. I WAS QUESTIONED ABOUT SPECIFIC FIELDS FOUND IN
22 THESE IDENTIFIED SEARCH LOGS.

23 Q. IN YOUR UNDERSTANDING AS A CHROME ENGINEER, CAN THESE BITS
24 FOUND IN THESE IDENTIFIED SEARCH LOGS BE MAPPED TO UMA DATA?

25 A. NO, THEY CANNOT.

1 MS. TREBICKA: THANK YOU, YOUR HONOR.

2 I HAVE NO FURTHER QUESTIONS.

3 THE COURT: THANK YOU.

4 CROSS EXAM?

5 **CROSS-EXAMINATION**

6 BY MR. MCGEE:

7 Q. DR. SADOWSKI, EARLIER YOU TESTIFIED THAT IOS TYPICALLY
8 DOES NOT SEND THE X-CLIENT DATA HEADER; CORRECT? IOS TRAFFIC?

9 A. I DON'T RECALL MY EXACT WORDS. I BELIEVE IT IS SENT WHEN
10 YOU DO AN OMNI BOX MEDIATED SEARCH OR NAVIGATION.

11 Q. BUT YOU CAN EXCLUDE IOS CHROME TRAFFIC WITH UTILIZING THE
12 USER AGENT STRING; CORRECT?

13 A. I DON'T KNOW WHAT YOU MEAN BY "YOU CAN EXCLUDE." FROM
14 WHERE?

15 Q. GOOGLE HAS SET ALL OF THE DATA THAT IS BEING SENT WITHOUT
16 AN X-CLIENT DATA HEADER, THAT CAN BE SEGMENTED BY THE USE OF A
17 USER AGENT STRING; CORRECT?

18 A. A USER AGENT STRING, I DON'T KNOW, FOR EXAMPLE, HOW OFTEN
19 THAT'S CORRECT. YOU CAN USE IT TO PARTITION DATA.

20 BUT I DO KNOW IT'S ALSO EASILY SPOOFED AND THERE'S THINGS
21 YOU CAN DOWNLOAD.

22 Q. HOW OFTEN IS IT EASILY SPOOFED? HOW OFTEN DO PEOPLE SPOOF
23 A USER AGENT STRING?

24 A. I HAVE NO IDEA.

25 Q. OKAY. DOES GOOGLE TRACK HOW OFTEN PEOPLE SPOOF USER AGENT

1 STRINGS?

2 A. I HAVE NO IDEA.

3 Q. OKAY. SO THAT WOULD JUST BE PURE SPECULATION AS TO HOW
4 OFTEN PEOPLE ARE SPOOFING USER AGENT STRINGS; CORRECT?

5 A. IT'S EASY TO SPOOF IS WHAT I SAID. I DID NOT MAKE ANY
6 CLAIMS ABOUT HOW OFTEN PEOPLE SPOOF IT.

7 Q. OKAY. AND YOU SAID THERE WERE ALSO FIRST RUNS WHERE AN
8 X-CLIENT DATA HEADER IS NOT SENT, CORRECT, WITH TRAFFIC?

9 A. YES, THAT'S ONE OTHER EXAMPLE.

10 Q. RIGHT.

11 A. BUT I WOULD LIKE TO MENTION THERE ARE MANY. I ONLY KNOW
12 SOME. I FIND OUT ABOUT MORE AS THEY COME UP.

13 Q. YEAH.

14 A. SOME ARE, AS I MENTIONED, THIS BUG WITH OLDER --

15 Q. AND I ONLY WANT TO SPEAK ABOUT THE ONES THAT YOU KNOW.
16 BUT IT'S AFTER A FIRST RUN; CORRECT?

17 A. IT --

18 Q. IN OTHER WORDS, IF SOMEONE BROWSES AROUND THE INTERNET,
19 CHROME QUICKLY STARTS SENDING AN X-CLIENT DATA HEADER; CORRECT?

20 A. I DON'T KNOW THE EXACT TIME IN BETWEEN.

21 Q. CAN YOU ESTIMATE IT?

22 A. NOT OFF THE TOP OF MY HEAD.

23 Q. IS IT TWO SEARCHES?

24 A. I DON'T WANT TO SPECULATE WITHOUT LOOKING AT THE SOURCE
25 CODE.

1 Q. OKAY. BUT YOU'D HAVE TO LOOK AT SOURCE CODE TO FIGURE
2 THAT OUT? IS THAT WHAT YOU'RE TELLING ME?

3 A. OR TALK TO SOMEONE OR DO SOME RESEARCH ABOUT LOOKING AT
4 DOCUMENTATION.

5 BUT THE EXACT TIME, NO. SO IT'S DURING -- DURING KIND OF
6 WHEN CHROME STARTS UP FOR THE FIRST TIME OR WHEN THAT, THAT
7 INSTALL OF CHROME STARTS UP FOR THE FIRST TIME.

8 Q. DID YOU DO ANY OF THAT RESEARCH IN PREPARATION FOR YOUR
9 TESTIMONY HERE TODAY?

10 A. I DID NOT --

11 Q. OKAY.

12 A. -- DO RESEARCH ABOUT THE EXACT LENGTH OF TIME THAT IS
13 ELAPSED BETWEEN STARTING UP CHROME AND SENDING AN X-CLIENT DATA
14 HEADER.

15 Q. OKAY. AND EARLIER IN YOUR TESTIMONY, YOU ALSO TESTIFIED
16 THAT IT'S YOUR OPINION THAT YOU CANNOT JOIN UMA AND GOOGLE USER
17 NAMES; CORRECT?

18 A. THAT IS CORRECT.

19 Q. AND WHY IS THAT?

20 A. BECAUSE UMA IS KEYED BY A RANDOM STRING CORRESPONDING TO A
21 CHROME INSTALL. THERE IS NO USER NAME INFORMATION IN THE UMA
22 DATA SET.

23 Q. SO THERE'S NO DIRECT LINK; CORRECT?

24 A. THAT IS CORRECT. THERE'S NO KEY THAT YOU CAN JOIN UMA
25 WITH ANOTHER DATA SET THAT IS A USER, USER ID BASED DATA SET.

1 Q. BUT IN THIS LITIGATION, GOOGLE PRODUCED OUR PLAINTIFFS'
2 UMA DATA; CORRECT?

3 A. I DO NOT KNOW EVERYTHING THAT GOOGLE PRODUCED IN THIS
4 LITIGATION.

5 IF YOU HAVE A PARTICULAR MACHINE, YOU CAN FIND THE UMA ID
6 FOR THAT MACHINE BECAUSE IT'S NOT A SECRET THING. YOU CAN LOOK
7 UP YOUR, YOUR OWN UMA DATA. SO IF YOU ARE A PERSON AND YOU
8 WANT TO KNOW, LIKE, YOUR OWN UMA CLIENT ID FOR A PARTICULAR
9 INSTALL OF CHROME, YOU CAN LOOK THAT UP.

10 BUT YOU CAN'T DO THAT AT ANY KIND OF SCALE.

11 Q. RIGHT. BUT GOOGLE WOULDN'T PRODUCE NON-PLAINTIFF DATA,
12 CORRECT, IN THIS LITIGATION?

13 A. I DO NOT KNOW THE FULL SET OF THINGS THAT GOOGLE HAS
14 PRODUCED IN THIS LITIGATION. I AM SURE THAT THERE ARE ALL
15 KINDS OF DOCUMENTS AND DATA SETS AND INFORMATION PRODUCED.

16 Q. SO I'D LIKE TO DRAW YOUR ATTENTION TO EXHIBIT 14 OF THE
17 DEPOSITION THAT I TOOK OF YOU BACK ON MARCH 10TH.

18 A. IS THIS --

19 Q. IT'S GOING TO COME UP ON THE SCREEN.

20 A. OKAY.

21 MR. MCGEE: AND, YOUR HONOR, THIS IS EXHIBIT 7 TO
22 MS. TREBICKA'S DECLARATION, WHICH IS FOUND AT DOCKET ENTRY
23 528-7.

24 Q. NOW, DR. SADOWSKI, WE TALKED -- DO YOU RECALL SPEAKING
25 WITH ME ABOUT THIS DOCUMENT?

1 THE COURT: MR. MCGEE, COULD YOU JUST IDENTIFY THE
2 BATES NUMBER?

3 MR. MCGEE: YES, YOUR HONOR, MY APOLOGIES, IT'S
4 GOOG-BRWN-00536949, AND IT'S THE SAME PAGE.

5 Q. DR. SADOWSKI, YOU RECALL SPEAKING WITH ME ABOUT THIS
6 DOCUMENT AT YOUR DEPOSITION; CORRECT?

7 A. I BELIEVE SO. I DEFINITELY RECALL REVIEWING THIS
8 DOCUMENT.

9 Q. AND QUENTIN FIARD IS AT THE TOP.
10 DO YOU REMEMBER SPEAKING ABOUT QUENTIN FIARD?

11 A. I DO.

12 Q. AND YOU SAID THAT THIS DOCUMENT RELATES TO
13 IS_CHROME_NON_INCOGNITO BIT; CORRECT?

14 A. THIS DOCUMENT RELATES TO THE IS_CHROME_NON_INCOGNITO MODE
15 BINARY FIELD.

16 Q. RIGHT. BUT NOWHERE MENTIONED IN THIS DOCUMENT IS THAT
17 ACTUAL REFERENCE; RIGHT?

18 A. THIS DOCUMENT PRECEDED IMPLEMENTATION. THIS IS A PROPOSAL
19 DOCUMENT FOR SOMETHING THEY WANTED TO DO.

20 THIS DOCUMENT IS LINKED FROM THE PARTICULAR FIELD
21 DEFINITION FOR THAT FIELD.

22 Q. RIGHT. IT WAS THE PROTO FIELD; RIGHT?

23 A. ANYTHING IS A BINARY PROTO FIELD.

24 Q. RIGHT. AND YOU SEARCHED ACROSS THE MULTI-BILLION LINE
25 GOOGLE CODE, THE REPOSITORY -- I THINK THAT'S WHAT YOU

1 TESTIFIED TO AT YOUR DEPOSITION -- TO FIND THAT PROTO COMMENT;
2 CORRECT?

3 A. I -- IF -- I LOOKED FOR A COUPLE OTHER SEARCH STRINGS THAT
4 WE TALKED ABOUT AT MY DEPOSITION.

5 FOR THIS PARTICULAR PROTO FIELD, IF YOU LOOK FOR
6 IS_CHROME_NON_INCOGNITO MODE, THERE IS ONE PARTICULAR PROTO
7 FIELD.

8 Q. YOU SAID THIS DOCUMENT PREDATES IMPLEMENTATION; CORRECT?

9 A. YES. THIS IS A PROPOSAL DOCUMENT THAT WAS USED TO GET
10 GOOGLE TO DO THE IMPLEMENTATION.

11 Q. BUT, AGAIN, NOWHERE IN THIS DOCUMENT DOES IT ACTUALLY
12 MENTION THE UNDERSCORE BIT, CORRECT? THE IS UNDERSCORE CHROME
13 UNDERSCORE NON UNDERSCORE INCOGNITO? YOU HAD TO DO THAT ON
14 YOUR BACK END WITH THE SOURCE CODE TO ACTUALLY IDENTIFY THIS
15 DOCUMENT AS RELATING TO THAT BIT; CORRECT?

16 A. THE REASONS I KNOW THIS DOCUMENT IS RELATED TO THAT BIT,
17 ONE IS FROM TALKING TO QUENTIN FIARD HIMSELF, WHO IS THE PERSON
18 THAT WROTE THIS DOCUMENT; TWO IS FROM THE FACT THAT THE
19 DEFINITION OF THE PROTO FIELD ACTUALLY DIRECTLY LINKS OUT TO
20 THIS DOCUMENT.

21 Q. RIGHT. AND EVERYTHING YOU KNOW ABOUT THESE BITS IS BASED
22 ON YOUR DISCUSSIONS WITH QUENTIN FIARD; CORRECT?

23 A. THAT IS NOT CORRECT. I SUBSEQUENTLY READ THE SOURCE CODE
24 THAT IS USED TO ACTUALLY WRITE THESE BITS.

25 Q. OKAY. ANYTHING ELSE?

1 A. I ALSO TALKED WITH TWO MEMBERS OF THE CURRENT TEAM THAT
2 QUENTIN WAS PREVIOUSLY ON.

3 Q. OKAY. AND IF I CAN BRING UP EXHIBIT 90.

4 AND, JUDGE, THAT'S GOING TO BE DOCKET ENTRY 528-7, AGAIN,
5 TO MS. TREBICKA'S DECLARATION. THAT'S EXHIBIT 15, AND IT BEARS
6 BATES GOOG-BRWN-176433.

7 AND THERE'S A PORTION OF THIS DOCUMENT HERE WHERE
8 MR. MARK PEARSON SAYS "FYI: FOR CHROME USERS, IT'S TECHNICALLY
9 POSSIBLE ON THE SEARCH SIDE TO DISTINGUISH BETWEEN INCOGNITO
10 AND NON-INCOGNITO SESSIONS ENTIRELY INDEPENDENTLY FROM THE
11 COOKIE STATE."

12 DO YOU SEE THAT?

13 A. YES.

14 Q. AND A LITTLE FARTHER DOWN IN THE DOCUMENT, "REGARDING
15 PEOPLE WHO DO THIS, I SUGGEST SEARCHING FOR 'X-CLIENT-DATA' IN
16 THE INTERNAL CODE SEARCH TOOL AND LOOKING FOR PAGES THAT
17 INCLUDE THE MENTION OF INCOGNITO."

18 DO YOU SEE THAT?

19 MR. SCHAPIRO: OBJECTION. MISSTATES THE DOCUMENT.

20 MR. MCGEE: SORRY. WHICH --

21 MR. SCHAPIRO: YOU DIDN'T READ IT CORRECTLY.

22 BY MR. MCGEE:

23 Q. OKAY. WELL, DR. SADOWSKI, YOU CAN READ THE DOCUMENT. I
24 DON'T MEAN TO MISSTATE IT.

25 BUT THE PART THAT SAID 2 PERIOD, REGARDING, CAN YOU READ

1 THAT FIRST SENTENCE FOR ME THAT'S HIGHLIGHTED?

2 A. "REGARDING PEOPLE WHO DO THIS, I SUGGEST SEARCHING FOR
3 'X-CLIENT-DATA' IN INTERNAL CODE SEARCH AND LOOKING FOR PAGES
4 THAT INCLUDED MENTION OF INCOGNITO."

5 Q. IS THAT THE SAME CODE SEARCH TOOL THAT YOU USED TO PREPARE
6 FOR YOUR 30(B)(6) DEPOSITION IN THIS CASE?

7 A. CODE SEARCH IS A, BASICALLY LIKE GOOGLE SEARCH, BUT FOR
8 CODE. YOU CAN SEARCH FOR ALL KINDS OF THINGS AND GET A VARIETY
9 OF RESULTS. SO IT IS --

10 Q. AND THAT'S HOW YOU SEARCHED FOR THE INCOGNITO DETECTION
11 BITS THAT WERE OUTLINED ON THE 30(B)(6) DEPOSITION NOTICES;
12 CORRECT?

13 A. YEAH. IF THERE'S A PARTICULAR STRING THAT I AM TRYING TO
14 FIND IN CODE, I WOULD USE CODE SEARCH TO SEARCH FOR IT.

15 OR IF THERE'S A PARTICULAR FILE I'M TRYING TO ACCESS, I
16 WOULD USE CODE SEARCH TO SEARCH FOR IT.

17 IT'S A VERY COMMONLY USED TOOL BY GOOGLE ENGINEERS IN THE
18 DAILY COURSE OF OUR JOBS.

19 Q. SO TO PREPARE FOR THAT DEPOSITION, DID YOU SEARCH FOR THE
20 X-CLIENT DATA IN THE CODE SEARCH TOOL AND LOOK FOR ANYTHING
21 THAT MENTIONED INCOGNITO?

22 A. I DON'T THINK I'VE GONE THROUGH EVERY MENTION OF X-CLIENT
23 DATA HEADER, OR X-CLIENT DATA IN CODE SEARCH.

24 Q. ANYONE ON YOUR TEAM DONE THAT?

25 THE COURT: LAST QUESTION.

1 THE WITNESS: MARK PEARSON IS ON MY TEAM.

2 I DON'T KNOW IF ANYONE ON MY TEAM HAS EVER SEARCHED FOR
3 X-CLIENT DATA HEADER AND INCOGNITO BEYOND THIS DOCUMENT.

4 AS A SIDE NOTE, I TALKED TO MARK ABOUT THIS PARTICULAR
5 DOCUMENT, AND HE ALSO CLARIFIED THAT HE -- THAT HIS STATEMENTS
6 THAT YOU CAN DISTINGUISH BETWEEN INCOGNITO AND NOT INCOGNITO
7 SESSIONS USING X-CLIENT DATA HEADER IS INCORRECT.

8 MR. MCGEE: YOUR HONOR, I'D MOVE TO STRIKE THAT LAST
9 PORTION AS HEARSAY AND NONRESPONSIVE.

10 THE COURT: STRICKEN.

11 MR. MCGEE: THANK YOU.

12 THE COURT: OKAY.

13 MR. MCGEE: AND JUST FOR THE RECORD, JUDGE, I BELIEVE
14 YOU SAID YOU SUSTAINED THAT OBJECTION.

15 THE COURT: I SUSTAINED THAT OBJECTION.

16 THANK YOU. THAT'S ALL, DR. SADOWSKI. YOU MAY STEP DOWN.

17 MR. BOIES: YOUR HONOR, JUST AS A HOUSEKEEPING
18 MATTER, I THINK WE FAILED TO OFFER INTO EVIDENCE EXHIBITS 85
19 AND 103, BUT WE WOULD OFFER THEM AT THIS TIME.

20 THE COURT: I'M SORRY, MR. BOIES. YOU'RE GOING TO
21 HAVE TO COME UP TO THE MICROPHONE.

22 MR. BOIES: I APOLOGIZE, YOUR HONOR.

23 I THINK JUST AS A HOUSEKEEPING MATTER, I DON'T THINK WE
24 OFFERED EXHIBITS 85 AND 103, BOTH OF WHICH WE USED, BUT WE
25 DIDN'T OFFER.

1 THE COURT: I WAS JUST GOING TO ASK BOTH SIDES IF
2 THEY HAVE EXHIBITS NOW THAT THEY USED IN THEIR EXAMINATIONS
3 THAT THEY WANT TO MOVE IN.

4 WE DID IT FOR SOME, BUT NOT ALL, SO I WANT TO BE SURE THAT
5 WE CAPTURE THEM.

6 IS THAT ALL THAT THE PLAINTIFFS HAVE TO ADD?

7 MR. BOIES: THAT'S ALL I HAVE IN MIND. MAYBE SOMEONE
8 ELSE ON THE TEAM --

9 THE COURT: OKAY. WHY DON'T YOU TAKE JUST A MINUTE
10 AND CONFER?

11 MS. TREBICKA: WE DO AS WELL, YOUR HONOR. MAY WE DO
12 IT NOW?

13 THE COURT: IF YOU'RE PREPARED TO, YES.

14 MS. TREBICKA: YES.

15 THE COURT: YOU MAY GO AHEAD. WHY DON'T YOU COME UP?

16 MS. TREBICKA: DO YOU NEED ME TO --

17 THE COURT: YEAH, COME ON UP TO THE PODIUM.

18 (PAUSE IN PROCEEDINGS.)

19 MR. BOIES: YOUR HONOR, I'M REMINDED ABOUT EXHIBITS
20 46 AND 48. SO IT WOULD BE 46, 48, 85, AND 103.

21 THE COURT: 46?

22 MR. BOIES: 46, PLAINTIFFS' EXHIBIT 46, PLAINTIFFS'
23 EXHIBIT 48, PLAINTIFFS' EXHIBIT 85, AND PLAINTIFFS'
24 EXHIBIT 103.

25 THE COURT: OKAY.

1 ANY OBJECTION? I'M GOING TO ADMIT THOSE.

2 MR. SCHAPIRO: NO OBJECTION, YOUR HONOR.

3 THE COURT: ALL RIGHT. THOSE WILL BE ADMITTED,
4 PLAINTIFFS' 46, 48, 85, AND 103.

5 (PLAINTIFFS' EXHIBITS 46, 48, 85 AND 103 WERE ADMITTED IN
6 EVIDENCE.)

7 THE COURT: AND FROM THE DEFENDANTS?

8 MS. TREBICKA: YOUR HONOR, WE'D LIKE TO MOVE INTO
9 EVIDENCE AS EXHIBIT B OF DEFENDANT'S TAB NUMBER 3 IN OUR
10 BINDER, WHICH IS BATES NUMBER GOOG-BRWN-00175184.

11 AS EXHIBIT C OF DEFENDANT'S, THE GLENN BERNSTON DEPOSITION
12 TRANSCRIPT OF JUNE 16TH, 2021. THAT IS TAB 15 IN OUR BINDER.

13 THE COURT: IS THAT AN EXCERPT OF THE TRANSCRIPT?

14 MS. TREBICKA: I BELIEVE IT'S THE ENTIRETY OF THE
15 TRANSCRIPT.

16 MR. MCGEE: YOUR HONOR, I DON'T KNOW IF YOU WANT A
17 RESPONSE BY US, BUT WE WOULD HAVE AN OBJECTION TO THAT. THAT
18 WAS 30(B)(6) TESTIMONY. I BELIEVE IT WOULD BE HEARSAY.

19 WE WOULD BE ABLE TO OFFER IT, BUT I DON'T BELIEVE THAT A
20 CORPORATION CAN OFFER ITS OWN 30(B)(6) TESTIMONY IN SUPPORT OF
21 EVIDENCE.

22 THE COURT: I ALSO DON'T BELIEVE IT WAS REFERRED TO
23 IN THE EXAMINATION.

24 MS. TREBICKA: IT WAS, YOUR HONOR.

25 NOT IN EXAMINATION OF WITNESSES. IT WAS REFERRED TO IN

1 COUNSEL ARGUMENT, WHICH WE UNDERSTOOD WAS -- IT WAS POSSIBLE
2 FOR US TO OFFER -- REFER TO EVIDENCE SO THAT WE COULD FORGO,
3 YOU KNOW, BRINGING WITNESSES IN IN SUPPORT OF THAT EVIDENCE.

4 THE COURT: IT'S NOT ALREADY IN THE RECORD, AND IT
5 HASN'T BEEN OFFERED THROUGH A WITNESS THIS AFTERNOON.

6 IF THERE ARE -- IF THERE'S AN EXCERPT OR SOMETHING
7 SPECIFIC, YOU MAY FOLLOW UP WITH A --

8 MS. TREBICKA: WE CAN DO THAT, YOUR HONOR. THANK
9 YOU.

10 THE COURT: BUT I'M NOT GOING TO ADMIT THE WHOLE
11 THING.

12 MS. TREBICKA: THANK YOU, YOUR HONOR.

13 AND WE'D ALSO LIKE TO OFFER AS EXHIBITS THE FEBRUARY 25TH
14 SPECIAL MASTER PROCEEDING TRANSCRIPT, AND THE MARCH 25TH --

15 THE COURT: I'M NOT GOING TO TAKE FULL TRANSCRIPTS.

16 MS. TREBICKA: WE CAN DO EXCERPTS. CAN WE DO THAT,
17 YOUR HONOR?

18 THE COURT: YOU WILL MEET AND CONFER ABOUT THOSE.

19 MS. TREBICKA: SOUNDS GOOD.

20 THANK YOU, YOUR HONOR.

21 THE COURT: OKAY. SO YOU'RE GOING TO MEET AND CONFER
22 ON THE BERNSTON DEPO, ON THE MAGISTRATE -- EXCUSE ME -- ON THE
23 SPECIAL MASTER TRANSCRIPT OF WHAT DATE?

24 MS. TREBICKA: YES, FEBRUARY 25TH AND MARCH 25TH.

25 THE COURT: YOU'LL IDENTIFY PORTIONS, THE PARTIES

1 WILL MEET AND CONFER, AND IF THERE'S A -- YOU CAN EITHER SUBMIT
2 A STIPULATION OR IF THERE'S A DISPUTE, YOU CAN STATE THAT
3 BRIEFLY AND I'LL RULE.

4 MR. MAO: YOUR HONOR, I BELIEVE I REFERRED TO
5 EXHIBIT, PLAINTIFFS' NUMBER 75. I WOULD LIKE TO ADMIT THAT
6 INTO EVIDENCE, YOUR HONOR.

7 THE COURT: YOU USED THAT WITH A WITNESS THIS
8 AFTERNOON?

9 MR. MAO: YES.

10 THE CLERK: I'M SORRY, PLAINTIFFS' 75?

11 THE COURT: PLAINTIFFS' 75.

12 THE CLERK: THAT WAS ADMITTED EARLIER.

13 THE COURT: THAT'S WHAT I THOUGHT.

14 MR. MAO: OKAY. THANK YOU.

15 THE COURT: ALL RIGHT. IS THAT ALL OF THE EXHIBITS?

16 MR. SCHAPIRO: I BELIEVE SO, YOUR HONOR.

17 THE COURT: ALL RIGHT.

18 MR. BOIES: I BELIEVE SO, YOUR HONOR.

19 THE COURT: ALL RIGHT. I DO NOT -- WE'VE HAD A LOT
20 OF DISCUSSION AND ARGUMENT TODAY, AS WELL AS WITNESS TESTIMONY.

21 FIRST, I DO WANT TO THANK COUNSEL ON BOTH SIDES. THOSE
22 WERE VERY EFFICIENT DIRECT AND CROSS-EXAMINATIONS. YOU MAY
23 HAVE JUST LAID THE FOUNDATION FOR THE TEN MINUTE RULE.

24 (LAUGHTER.)

25 THE COURT: I DON'T FEEL THE NEED FOR CLOSING

1 ARGUMENTS. I THINK THAT EVERYONE HAS TOUCHED ON THE POINTS. I
2 FEEL I HAVE A VERY GOOD UNDERSTANDING OF THE ISSUES IN DISPUTE
3 AND THE EVIDENCE, IMPORTANTLY, THE EVIDENCE ON BOTH SIDES OF
4 THESE DISPUTES.

5 SO UNLESS SOMEONE WANTS TO BE HEARD TO THE CONTRARY, WE
6 WILL FORGO ANY FURTHER CLOSING.

7 FROM PLAINTIFFS, MR. BOIES?

8 MR. BOIES: YOUR HONOR, I THINK WE ARE BOTH PREPARED
9 TO GO WITH THE COURT'S JUDGMENT.

10 THE COURT: ALL RIGHT.

11 AND FROM GOOGLE?

12 MR. SCHAPIRO: THAT'S CORRECT, YOUR HONOR.

13 THE COURT: ALL RIGHT. EXCELLENT.

14 THEN THE MATTER WILL BE SUBMITTED, AND I WILL GIVE IT
15 CAREFUL CONSIDERATION.

16 IF I NEED ANYTHING FURTHER, I WILL ASK THE PARTIES TO
17 SUBMIT THAT.

18 BUT, AGAIN, I WILL USE ANYTHING THAT HAS BEEN FILED ON ECF
19 AS PART OF THE RECORD, AS WELL AS UNIQUE EXHIBITS THAT HAVE
20 BEEN ADMITTED HERE TODAY.

21 YOU HAVE A LITTLE BIT OF HOUSEKEEPING ON THE TWO EXHIBITS
22 WE JUST DISCUSSED, SO TAKE CARE OF THAT IN THE NEXT SEVEN DAYS.

23 OKAY. ANYTHING FURTHER FOR TODAY'S PROCEEDINGS FROM
24 PLAINTIFFS, MR. BOIES?

25 MR. BOIES: NO, YOUR HONOR.

1 THE COURT: ALL RIGHT.

2 MR. SCHAPIRO?

3 MR. SCHAPIRO: NOTHING, YOUR HONOR.

4 THE COURT: OKAY. THANK YOU.

5 ALL RIGHT THEN. THAT CONCLUDES THIS PROCEEDING.

6 MR. BOIES: THANK YOU, YOUR HONOR.

7 MR. MAO: THANK YOU, YOUR HONOR.

8 MR. SCHAPIRO: THANK YOU, YOUR HONOR.

9 THE COURT: AND YOU MAY PACK UP AND RUN WHILE I SORT
10 MY BINDERS.

11 MS. TREBICKA: THANK YOU, YOUR HONOR.

12 (THE PROCEEDINGS WERE CONCLUDED AT 4:58 P.M.)

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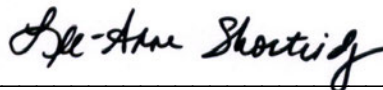
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CERTIFICATE OF REPORTER

I, THE UNDERSIGNED OFFICIAL COURT REPORTER OF THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA, 280 SOUTH FIRST STREET, SAN JOSE, CALIFORNIA, DO HEREBY CERTIFY:

THAT THE FOREGOING TRANSCRIPT, CERTIFICATE INCLUSIVE, IS A CORRECT TRANSCRIPT FROM THE RECORD OF PROCEEDINGS IN THE ABOVE-ENTITLED MATTER.



LEE-ANNE SHORTRIDGE, CSR, CRR
CERTIFICATE NUMBER 9595

DATED: APRIL 29, 2022